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SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1937

No. 161

SOUTH CAROLINA STATE HIGHWAY DEPARTMENT, SOUTH CAROLINA PUBLIC SERVICE COMMISSION, ET AL.,

Appellants,

vs.

BARNWELL BROTHERS, INC., POOLE TRANSPORTATION, INC., HORTON MOTOR LINES, INC., ET AL.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE EASTERN DISTRICT OF SOUTH CAROLINA.

BRIEF OF THE STATE OF SOUTH CAROLINA AND ITS OFFICIALS, ORIGINAL DEFENDANTS, APPELLANTS.

JOHN M. DANIEL,
Attorney General of South Carolina;
J. IVEY HUMPHREY,
Assistant Attorney General of South Carolina;
M. J. HOUGH,
Assistant Attorney General of South Carolina;
EUGENE S. BLEASE,
STEVE C. GRIFFITH,
Attorneys for Original Defendants, Appellants.

Page

(c) The facility of compliance with a gross load limitation justifies it as a valid measure, preferable to a wheel load limit, since it bears a practical relationship to the protection of the pavement 71

(d) An absolute and independent justification of the South Carolina gross load limitation exists in the varying subgrade conditions found 72

(e) The provision in Section 2 that a tractor-semitrailer combination shall be considered as one vehicle for the purpose of the 20,000 pounds gross weight limitation, is valid 81

(f) The width limitation of ninety inches is valid 83

2. The decree was based upon the premise that there is a well connected system of concrete roads in South Carolina and the record does not show that such well connected system exists 86

3. The statute is reasonable and necessary as a means of protecting all of the highways and bridges in the State and as a means of promoting safety in their use and the Court erred in holding it unreasonable because it had concluded that it was unreasonable as applied to vehicles on a limited portion of the State's highways 95

4. Crediting appellees' evidence with all the effect which may properly be attributed to it, the reasonableness of the statute remains a fairly debatable question which should have been left to the legislature 106

III. The Court's conclusions as to the invalidity of the statute are erroneous because based upon improper tests of reasonableness 109

IV. The District Court had no power to classify the roads and bridges or to rewrite the width limit as those are legislative functions; and lacking such power the Court was required under the evidence and applicable law to hold the entire statute valid as to all roads and bridges 139

Conclusion 144

Appendices.

Appendix I—Act No. 259, South Carolina Statutes of 1933, 38 Stats. at Large 340 146

Appendix II—Act No. 575, South Carolina Statutes of 1931, 37 Stats. at Large 1086 153

Appendix III—Act No. 602, South Carolina Statutes of 1920, 31

Page

Stats. at Large 1072 155
Appendix IV—Act No. 721, South Carolina Statutes of 1924, 32 Stats. at Large 1182 157
Appendix V—Act No. 685, South Carolina Statutes of 1930, 36 Stats. at Large 1192 158
Appendix VI—Act V, Article XVI, Sec. 146, Uniform Act Regulating Traffic on the Highways 159
Appendix VII—Highway Map of South Carolina showing roads inspected by appellees' witness, Harry Tucker 161

CASES CITED.

Aero Mayflower Transit Co. v. *Georgia Public Service Com.*, 295 U. S. 285 101
Ashton v. *Cameron County Water Improvement District*, 298 U. S. 513 113
A., T. & S. F. R. Co. v. *Railroad Comm.*, 283 U. S. 380 ..... 45, 110
Bayside Fish Flour Co. v. *Gentry*, 297 U. S. 422 ..... 105, 119
Bradley v. *Public Utilities Comm.*, 289 U. S. 92 ..... 38, 41, 122
Buck v. *Kuykendall*, 267 U. S. 307 109
Bush v. *Maloy*, 267 U. S. 317 109
Carley and Hamilton v. *Snook*, 281 U. S. 66 102
Carey v. *South Dakota*, 250 U. S. 118 ..... 45, 110
Continental Baking Company v. *Woodring*, 286 U. S. 352 44
Erie Railroad Co. v. *Board of Public Commrs.*, 254 U. S. 394 115
Euclid v. *Ambler Realty Co.*, 272 U. S. 365 ..... 49, 103, 142
Geer v. *Connecticut*, 161 U. S. 519 ..... 38, 42
Hebe Co. v. *Shaw*, 248 U. S. 297 ..... 105, 142
Hendrick v. *Maryland*, 235 U. S. 610 43
Holyoke Water Power Co. v. *American Writing Paper Co.*, 81 L. Ed. (Adv.) 383 ..... 104, 142
Houston & North Texas Freight Lines v. *Phares*, 19 Fed. Supp. 420 114
Hudson County Water Co. v. *McCarter*, 209 U. S. 349 ..... 38, 42
Interstate Busses Corp. v. *Blodgett*, 276 U. S. 245 88
Interstate Trucking Co. v. *Damman*, 241 N. W. 625 102
Keokee Consolidated Coke Co. v. *Taylor*, 234 U. S. 224 88
L. & L. Freight Lines v. *Railroad Comm. of Florida*, 17 Fed. Supp. 13 114
Liberty Oil Co. v. *Condon National Bank*, 260 U. S. 235 ..... 49, 50
Lindsley v. *Natural Carbonic Gas Co.*, 220 U. S. 61 88
Maxwell v. *Moore*, 22 How. 185 140
McLean v. *D. & R. G. RR. Co.*, 203 U. S. 38 ..... 49, 106
Minnesota Rate Cases, 230 U. S. 352 122
Mintz v. *Baldwin*, 289 U. S. 346 ..... 45, 110
Morris v. *Duby*, 274 U. S. 135 38
Morley Construction Co. v. *Maryland Casualty Co.*, 300 U. S. 185 49
N. Y., N. H. & H. R. Co. v. *New York*, 165 U. S. 628 ..... 38, 49
Nashville, C. & St. L. Ry. v. *Walters*, 294 U. S. 405 ..... 109, 133

Page

N. C. & St. L. R. Co. v. *White*, 278 U. S. 456 106
Pierce Oil Corp. v. *Hope*, 248 U. S. 498 ..... 105, 142
Pullman Co. v. *Knott*, 235 U. S. 23 88
Purity Extract & Tonic Co. v. *Lynch*, 226 U. S. 192 ..... 104, 142
Radio Corporation v. *Radio Engineering Laboratory*, 293 U. S. 1 .. 50
Railroad Comm. of Texas v. *Southwestern Greyhound Lines*, 92 S. W. (2d) 296 114
Silz v. *Hesterberg*, 211 U. S. 31 ..... 38, 49, 142
Simpson v. *Shepard*, 230 U. S. 352 40
Singer Sewing Machine Co. v. *Brickell*, 233 U. S. 304 141
Smith v. *Cahoon*, 283 U. S. 553 97
Sproles v. *Binford*, 286 U. S. 374 38
Sprout v. *South Bend*, 277 U. S. 163 ..... 43, 44
Standard Oil Co. v. *Marysville*, 279 U. S. 582 49
State ex rel. Daniel v. *John P. Nutt Co.*, 180 S. C. 19, 185 S. E. 25, 297 U. S. 724 ..... 6, 43
Stephenson v. *Binford*, 287 U. S. 251 38
Townsend v. *Yeomans*, No. 781, decided May 24, 1937, 81 L. Ed. (Adv.) 840 ..... 45, 110, 122
U. S. v. *Butler*, 297 U. S. 1 113
United States v. *Detroit Timber & Lumber Co.*, 200 U. S. 321 49
Werner Transportation Co. v. *Hughes*, 19 Fed. Supp. 425 ..... 58, 78, 114
Werner Transportation Co. v. *O'Brian* (opinion not published, D. C. S. Dist. Iowa, February 15, 1937) 114
Williams v. *Baltimore*, 289 U. S. 36 88

STATUTES CITED.

United States Statutes.

Constitution:
Commerce Clause, Art. 1, Sec. 8, Cl. 3 7
14th Amendment 7, 43, 134
Federal Highway Act (Secs. 1 to 56, Title 23, U. S. C.) 7, 109
Motor Carrier Act, 1935 (Secs. 301 to 327, Title 49, U. S. C.) 8, 109

South Carolina Statutes.

Act No. 602, approved March 10, 1920 (31 Stats. at Large 1072) .. 4, 5
Act No. 721, approved March 26, 1924 (33 Stats. at Large 1182) .. 4
Act No. 685, approved March 20, 1930 (36 Stats. at Large 1192) .. 4
Act No. 575, approved June 27, 1931 (37 Stats. at Large 1086), printed as Appendix II 5
Act No. 259, approved April 28, 1933 (38 Stats. at Large 340), printed as Appendix I 2
Act No. 746, approved March 10, 1934 (38 Stats. at Large 1311) .. 3

GENERAL PUBLICATIONS CITED.

National Research Council, 1926—page 67 53
Public Roads—May, 1929, Vol. 10—No. 3, page 37 73

Page

September, 1931, Vol. 12—No. 7, page 181 76
December, 1933, Vol. 14—No. 10, page 188 77
May, 1935, Vol. 16—No. 3, page 42 ..... 64, 65
November, 1935, Vol. 16—No. 9, page 169 60
December, 1935, Vol. 16—No. 10, page 201 61
January, 1937, Vol. 17—No. 11, page 249 75
Readers Digest, September, 1936—page 53 98
Scientific American, September, 1936—page 138 .....
United States Department of Agriculture, Bureau of Public Roads—
Section 146 of Act V, Uniform Act Regulatory Traffic on Highways—pages 37-38 159

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Appellees.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE EASTERN DISTRICT OF SOUTH CAROLINA.

BRIEF FOR APPELLANTS.

Opinion of the Lower Court.

The opinion of the specially constituted District Court of the United States for the Eastern District of South Carolina, filed January 20, 1937, is reported in 17 Fed. Supp., p. 803, and is found on page 55 of the record.

Jurisdictional Statement.

The statement as to jurisdiction required by Rule 12 of this Court, was filed on June 1, 1937, and probable jurisdiction was noted on October 11, 1937.

Statement of Case.*

This case is an appeal from the final decree of the specially constituted District Court of the United States for the Eastern District of South Carolina entered by that court on January 20, 1937 (R. 85). The decree permanently enjoins the enforcement of certain sections of a statute of South Carolina which limit the weight and width of motor trucks which may be used on its highways in interstate commerce. The injunction is limited to the plaintiffs below, while they are engaged in interstate commerce on certain designated highways only and such other Federal aid highways as may be of standard concrete, or asphalt and concrete construction (R. 85).

Statute Involved.

The statute of South Carolina the validity of which is involved herein is Act No. 259, approved April 28, 1933, entitled in part, "An Act to Regulate and Limit the Use of the Public Highways in the State by Motor Trucks, Semi-Trailer Motor Trucks, Semi-Trailers and Trailers; * * *" and is found in Vol. 38, St. at Large, p. 340 (Appendix I).

The pertinent provisions of the statute are:

Sec. 1 declares the public policy of the State as to the effect of heavy motor trucks on the construction, maintenance and safety of use of the highways.

NOTE.—For the convenience of the Court, counsel for the original and intervening defendants, appellants, have incorporated in their separate briefs identical statements of the case, legislative and judicial history, and summary of the evidence.

Sec. 4 provides that "No person shall operate on any highway any motor truck or semi-trailer truck whose gross weight, including load, shall exceed 20,000 pounds;" which should be read in connection with the definition in Sec. 2 reading: " 'Semi-Trailer Motor Trucks' means any motor-propelled truck not operated or driven on fixed rails or tracks, designed to draw, and to support the front end of a semi-trailer. The tractor (or motor-propelled truck), together with the semi-trailer shall be considered one unit, and the words, 'Semi-trailer motor truck' as used in this Act, shall mean and embrace such entire unit * * *'."

Sec. 6 provides that "No person shall operate on any highway any motor truck or semi-trailer motor truck whose total outside width, including any part of body or load, shall exceed 90 inches".

Sec. 7 of the contested Act, relating to the permissible lengths of vehicles was slightly amended by Act No. 746, approved March 10, 1934 (38 St. at Large 1311), adding certain kinds of transportation to the exemptions of the Section, but such amendment is not material in this case.

While the bill of complaint (R. 2, 19) attacked the validity of Sec. 3 of the statute, which prohibits the operation of trailers, and Sec. 7, which imposes a length limit of 35 feet, the attack on these two Sections was abandoned during the suit, that is to say there was no evidence introduced by appellees to sustain their attack on these two sections and only Sec. 4, imposing a gross weight limit of 20,000 pounds, and the provision of Sec. 2, requiring a tractor semi-trailer combination to be considered as a single unit for determining weight, and Sec. 6, imposing width limit of 90 inches, were adjudged to be invalid.

Legislative History of Statute.

The Legislature of South Carolina first dealt with the weight and width limit of motor vehicles in 1920. Act No.

602, approved March 10, 1920 (31 Stats. at Large 1072), Appendix III, created the State Highway Department and Sec. 13 thereof, which dealt primarily with the licensing of motor vehicles, based on the manufacturer's weight, contemplated the licensing of trucks "up to and including seven and over (tons)" but "Provided, that no truck larger than a four-ton truck shall be allowed to be used on any highway or public road of this State, unless the person desiring to operate any such truck larger than a four-ton truck shall first make a petition to the authorities in charge of the roads in any county where it is proposed to operate such truck, stating the road or roads proposed to be used" and unless the road authorities consent to the use of such truck on such roads with the approval of the State Highway Engineer.

Act No. 721, approved March 26, 1924 (33 Stats. at Large 1182), Appendix IV, regulated traffic upon the highways of the State. Sec. 1 thereof made it unlawful to operate on any public road of the State, whether such roads are in the State system or not, "any vehicle of four wheels or less, the gross weight of which, including its load, is more than 20,000 pounds, or to operate any vehicle having a greater weight than 15,000 pounds on any one axle, or having a load of over 600 pounds per inch width of wheel concentrated upon the road surface".

Act No. 685, approved March 20, 1930 (36 Stats. at Large 1192), Appendix V, again changed the weight limits of motor vehicles and Sec. 3 thereof provided: "Except as authorized in Sec. 4 hereof, no vehicle, whether operated singly or in combination with other vehicles on the public roads of this State, shall exceed in gross weight twelve and one-half (12½) tons, and the gross weight on no axle of any vehicle or combination of vehicles, having more than two axles, shall exceed five (5) tons. Any vehicle having more than two axles shall be so designed and constructed as to

assure a constant distribution of weight among the axles while such vehicles are in operation, regardless of irregularities in the road surface. No combination of vehicles operated as a unit on the public roads of the State shall have a gross weight exceeding twenty (20) tons: * * *".

In 1931, there was enacted Act No. 575, approved June 27, 1931 (37 Stats. at Large 1086, Appendix II), which created a commission to investigate motor transportation in the State of South Carolina and required the report of the commission to be made to the 1932 Session of the General Assembly, and to include "full findings of fact, together with recommendations and suggested legislation, preferably in the form of Bills." This commission held exhaustive hearings, with full opportunity to interested parties to present their views. During such hearing, Dr. C. H. Moorefield, then Chief Engineer of the State Highway Department, and distinguished as a highway engineer and builder, appeared and testified. His statement was introduced in evidence in this case and incorporated a statement previously prepared by him as testimony on a similar investigation held by the State Railroad Commission (Exhibits 8, 9 and 10, R. 255-271).

The foregoing recital of legislative history of the statute indicates most clearly the previous experiments the Legislature had made in trying to arrive at a proper weight limit and the deliberate consideration given to the subject for two years preceding the enactment in 1933 of the limitations herein assailed.

The present width limit of 90 inches was imposed by Act No. 602, approved March 10, 1920 (31 Stats. at Large 1072), and has since been continued unchanged.

Judicial History of the Statute.

Before this suit was begun, the same provisions of the statute now assailed were upheld by the South Carolina

Supreme Court in a suit in which the same constitutional objections (including the attack under the Commerce Clause, but not including that based on the Federal Motor Carrier Act, 1935) were raised in the case of *State* v. *John P. Nutt Co.*, 180 S. C. 19; certiorari denied by this Court March 30, 1936, 297 U. S. 724. The opinion in that case, relying on numerous decisions of this Court, fully sustained the statute and also contains a detailed history of successful resistance to the enforcement of the Act by interests opposed to it, indicating a long continued thwarting of the legislative will by injunctive process. Notwithstanding the fact that the motor carriers who are parties plaintiff herein were not parties to any of the actions in the lower State courts mentioned in the opinion in the *John P. Nutt* case, it seems a clear inference from the allegations of the bill in this case that these parties successfully defied the enforcement of the South Carolina Act during this period and even continued to operate in violation thereof after the final determination of the validity of the statute by refusal of this Court to grant certiorari and until the granting of the temporary restraining order herein in November, 1936 (R. 37).

It may be further noted, in connection with the Judicial History of this Statute, that the District Judge herein, who had first heard the motion to dismiss in this case before the application for an interlocutory injunction and the convening of the Three Judge District Court, reached the same conclusion in upholding the statute, both under the Fourteenth Amendment and the Commerce Clause, as did the State Supreme Court (R. 24, 25).

Summary of Complaint.

The suit was commenced by a complaint filed on the 11th day of August, 1936, wherein seven parties, engaged in the transportation of property in interstate commerce, as common or contract carriers by motor truck, and four parties,

engaged in shipping produce or merchandise by motor truck in interstate commerce, joined as plaintiffs (R. 2-3). The prayer asked only a permanent injunction (R. 19).

The defendants (appellants) included the South Carolina State Highway Department and the South Carolina Public Service Commission, both administrative agencies of the State, their officers and employees, various other officers of the State, and police officers, all charged with the duty of enforcing the Act (R. 3-4).

Certain shippers and the Interstate Commerce Commission were permitted to intervene as parties plaintiff (R. 42, 50-54) and certain railroads were permitted to intervene as parties defendants (R. 43, 49, 54). The Interstate Commerce Commission asked to intervene only because of its interest in the enforcement of the Motor Carrier Act, 1935 (R. 43).

The complaint alleged that the weight and width limits of the Act were invalid on the grounds that:

(1) They violate the Fourteenth Amendment of the Constitution of the United States, in that they are unreasonable, arbitrary and capricious and have no real and substantial relation to the object sought to be obtained by the Act (paragraph 6 of complaint, R. 7).

(2) They violate Section 8, Article 1, of the Constitution of the United States, in that they constitute a direct and substantial burden on interstate commerce (paragraph 7 of complaint, R. 8).

(3) They are so arbitrary and unreasonable that they defeat the useful purposes for which Federal Aid (Secs. 1 to 56, Title 23, U. S. C.) has been granted, i. e., the bettering of the highway system of the United States and the promotion of the national defense (paragraph 8 of complaint, R. 8).

(4) The Motor Carrier Act, 1935 (Sec. 301 to 327, Title 49, U. S. C.), (a) has entirely superseded the South Carolina statute, and (b) renders the South Carolina statute a direct and substantial burden on and interference with interstate commerce, in violation of the Commerce Clause of the Federal Constitution, in that the enforcement of such statute subverts and defeats the declared purposes of said Motor Carrier Act (paragraph 9 of complaint, R. 8-11).

As a factual basis for the relief asked, the complaint further alleged (R. 8) that the essential service of interstate commerce cannot be performed by the several motor carriers with the use of motor equipment limited to a maximum weight of 20,000 pounds and the effect of such limitations in South Carolina would prevent interstate motor carriers from rendering adequate and efficient transportation service and (R. 15) will substantially increase the cost and time of transportation by plaintiffs and substantially increase the cost of transportation to the public and affect the price of goods moving in interstate commerce. There were further allegations that if the limitations of the statute were enforced, plaintiffs will be irreparably damaged and their business impaired or ruined (R. 12, 16, 17).

Rulings Below and Final Decree.

Before the convening of the Statutory Three Judge Court, the District Judge had granted Appellants' motion to dismiss complaint as to Paragraphs 4, 5, 6, 7 and 8 thereof, Paragraph 7 having alleged that the statute violated the Commerce Clause, but refused the motion as to Paragraph 9 of the complaint which related to the Motor Carrier Act, 1935 (Opinion and Orders, R. 22-32).

Appellants filed their answer putting in issue the material allegations of the complaint (R. 38) and appellees (plaintiffs) thereupon moved for interlocutory injunction pending final hearing (R. 32, 33). This was presented to a

single Judge who, after hearing, ordered temporary restraining order to issue to remain in effect until the application for interlocutory injunction could be decided by a three-judge court (R. 34-38). The District Judge convened the Three Judge Court pursuant to statute, before which all subsequent proceedings were had (R. 42). Appellants again moved to dismiss the complaint (R. 44) which motion, after argument, was overruled (R. 97).

The Court ruled that it would reconsider all of the questions heretofore determined by the District Judge and render decision on the complaint as filed (R. 97) and further ruled as to the scope of the hearing (R. 98): "In other words, we will pass upon the question as to whether the Act constitutes an unreasonable burden upon interstate commerce, and we are of the opinion that testimony should be addressed to that question and that question alone, and we see no reason why any great volume of testimony need be taken, or we see no reason why the taking of testimony should consume very much time."

It was thereupon agreed in open court that the hearing should be both final and interlocutory and a final decree should be rendered upon the hearing (R. 99). The Court found and held in its opinion on the final decree that the South Carolina statute did not violate the Due Process or Equal Protection clauses of the Fourteenth Amendment (Fourth conclusion of Law, R. 84) and held that these questions were sufficiently dealt with in the *Nutt Company* case, *supra* (R. 57); and further held that Congress had not assumed to control the size and weight of motor vehicles by the enactment of the Motor Carrier Act, 1935 (Third conclusion of law, R. 84, and opinion of the Court, R. 57).

The final Decree of the Court (R. 85) adjudged and decreed:

"(1) That the defendants, their agents and servants, be and they hereby are, restrained and enjoined from

enforcing against the plaintiffs while they are engaged in interstate commerce on the highways of the State of South Carolina numbered 1, 15-A, 17, 21, 25, 29, and 52, or on such portions of *other federal aid highways* as may be of standard concrete or concrete and asphalt construction, any provision of Act No. 259 of the General Assembly of South Carolina limiting the gross weight of trucks on highways to 20,000 pounds, or providing that a tractor semi-trailer combination shall be considered a single unit for the purpose of determining weight and thereby limiting the gross weight of such combination to 20,000 pounds, or limiting the width of (fol. 103) vehicles to 90 inches, if the vehicle does not exceed 96 inches in width.

"(2) That the provisions of this injunctive order shall not extend to bridges on the highways mentioned in the preceding paragraph where such bridges have not been constructed with sufficient strength to support the heavy trucks of modern traffic or are too narrow to accommodate such traffic safely, provided that the State Highway Department shall erect at each end of any such bridge a proper notice of sufficient size and character to give ample warning that the use of the bridge is forbidden by trucks exceeding the weight or width limit, and further provided that the proper authorities shall take the necessary steps to enforce the law against the use of such bridges by such trucks."

Paragraph (3) of the decree provided that the injunction was denied with respect to the other roads and bridges of the State, and by (5) jurisdiction was retained by the Court for the purpose of making any such changes as to paragraphs one or two of the decree as may hereafter appear to be proper.

It will be noted from Paragraph (1) of the decree, that while the complaint asked for an injunction generally against the enforcement of the Act as to interstate commerce, without referring to any particular numbered or

described highways of the State system, the Court below by its decree undertook to select certain specifically numbered Federal aid highways and "such portions of other Federal aid highways as may be of standard concrete or concrete and asphalt construction" as the subjects of its injunctive relief; and the second paragraph of its decree, excluding therefrom weak or narrow bridges, is conditioned on the performance of certain requirements imposed therein by the Court upon the South Carolina Highway Department.

Summary of Evidence.

Most of appellees' testimony was offered to show the effect of the enforcement of the State statutes upon interstate commerce. The appellants offered no testimony on that issue.

The eighteen witnesses offered by appellees on that question testified, in substance, that the weight and size of trucks used by carriers for hire are important in determining rates, and that the limits imposed by the South Carolina statute will greatly increase rates. They mentioned particularly a number of commodities, including fertilizer, household goods and furniture, lumber, flour, cotton, textile products, produce of truck farmers and vegetable growers, and stocks of chain stores. Witnesses for appellees testified that enforcement of the 20,000 pounds weight limitation will increase the cost of transportation of South Carolina produce to markets in other states, thus putting such produce at a disadvantage in competing with similar produce from states having a higher weight limitation and that the cost of operating the truck decreases per unit of commodity carried as the total pay load increases (R. 100-117; 142-158); that truck competition with railroads has tended to keep the level of rail rates down as to cotton shipped into the Port of Charleston (R. 107).

Vegetable growers in South Carolina ship to markets outside of the State by refrigerator trucks and most of such trucks are too large to comply with the South Carolina weight and width limitations; they are mostly owned in other States and used in all States; that rail service for less than carload lots is more expensive and slower than truck service and that the enforcement of the South Carolina law will put the South Carolina vegetable growers at a disadvantage with those of other States (R. 107-112; 152-153).

One of the plaintiffs, a carrier who operates in all of the forty-eight States, admitted that he was making money, and that in States like Texas, Tennessee and Alabama, in which he could not use his big trucks, he had special equipment complying with the State laws (R. 147). Another witness, employed in the Bureau of Motor Carriers, Interstate Commerce Commission, stated that trucks are still operated in the States of Texas, Kentucky and Tennessee (R. 142). Another of appellees' witnesses testified that the enforcement of the Act would cause large cargoes of freight now coming into the Port of Charleston to be diverted to other ports (R. 100-106; 204-205).

Many figures and much data from public records were offered, and testified to, showing the following uncontradicted facts. In South Carolina, there are approximately 60,000 miles of public roads, of which about 6,100 miles comprise the State Highway System. The roads in the State Highway System are classified as: "standard paving," of which there were (as of June 30, 1936) 2,417 miles; bituminous surfacing of which there were 1,724 miles; earth type roads, of which there were 1,141 miles; and unimproved roads, of which there were 666 miles. The classification of "standard paving", includes pavement that is wholly concrete, asphalt pavement on a concrete base, and

asphalt pavement on asphalt base (R. 159). The pavement wholly of concrete amounts to 1,800 to 2,000 (R. 160) miles. About 40 percent. of the concrete pavement has center joints (R. 178). Some of the pavements are 16 feet wide and some 20 feet wide, but most of them are 18 feet wide (R. 117).

The State Highway System has cost approximately One Hundred and Fifteen Million Dollars (R. 173-174), of which Twenty-nine Million, Seven Hundred and Forty-one Thousand Dollars was received from Federal aid (R. 137). Maps were used by both parties showing the particular roads upon which Federal aid was used (Exhibit 7, R. 254A; Exhibit 6, 300B, 300C). On Federal aid projects the cost was borne partly by the State and partly by the Federal Government, except some short sections which were built entirely by Federal funds (R. 158-159). No one road in the State is in its entirety a Federal aid project, that is to say, portions of the road were built by Federal aid, while other portions were built entirely by State funds (R. 191-192). Exhibit 4 (R. 253) shows the total mileage of completed Federal aid projects to be 2,798.7 miles; of this 795.8 miles are of concrete and 193.5 miles of bituminous concrete, the rest of this mileage being of low type roads. Exhibit 11 (R. 271-272) shows that there are 4,322 miles of road in South Carolina embraced within the approved Federal aid system.

Exhibit 14 (R. 273) gives the total registration of all motor vehicles in the State by years, from 1925 to 1936, and Exhibit 13 (R. 272) gives the trucks registered by rated capacity from 1933 to 1936. In 1936, there was a total motor vehicle registration of 253,488. There were 30,497 trucks registered. Of these 2,639 trucks exceeded two tons capacity, of which *only 328 exceeded three tons*

capacity, and of this 328 *only 19 exceeded four tons capacity.* Carriers for hire use two to three tons capacity semi-trailer outfits of which class 522 were registered in 1933 and 2,306 in 1936; and no other type has increased in proportion (R. 229). The number of vehicles used for hire in intrastate and interstate commerce, and registered with the Public Service Commission of the State, totaled 111 operated by common carriers, and 1,202 operated by contract carriers (R. 230-231). The irregular route common carrier is classed as a contract carrier under South Carolina law (R. 231).

The conflicting testimony was directed primarily to the questions as to whether or not the assailed provisions of the State Act bear any relation to conserving the highways, maintenance costs, traffic control, and safety thereon.

On these main issues, the plaintiffs offered four witnesses. Harry Tucker, Professor of Engineering in North Carolina State College, and Director of the Engineering Experiment Station at Raleigh, N. C., testified that the gross weight of a motor vehicle does not enter into the design of a concrete highway, or its equivalent; that gross weight of a vehicle has nothing to do with conserving the highway or the cost of maintaining it. In his opinion, the only test is the wheel load. He did not know much about the highway system of the State, but had made a trip over some of the concrete roads of South Carolina, looked at them, and saw no evidence of undue deterioration and they were well constructed and drained. A map showing the route he traveled on such trip is appendix VII. He testified that it is almost impossible to say what causes a failure of pavement, especially a concrete pavement, there are so many factors entering into it (R. 125). He was informed by the South Carolina Highway Department that two sections of concrete pavement are used on the roads he examined; one, 7½-6-7½ which means 7½ inches thick at

the edges and 6 inches thick in the center; and the other 8-6½-8. He expressed the opinion that the concrete roads that he examined will carry a wheel load of from 8,000 to 8,500 pounds, or an axle load of 16,000 to 18,000 pounds safely. He said: "As to how we determine that, we have methods developed originally by Mr. Clifford Older, by the Bureau of Public Roads, by Mr. Westergard, of the University of Illinois, by which, knowing the thickness of a pavement and the strength of the concrete out of which it is constructed, we can determine the wheel load, and therefore, the axle load, which that pavement will carry." He further testified that there is no cumulative stress caused in a concrete pavement by the three axles of a tractor-semi-trailer combination; the three axles, if carrying the same load, and if at least 40 inches apart, each causes a stress in the pavement independently of the other axle; the three axles do not increase the stress. Concrete road sections with a minimum thickness at the center of six inches are good for an axle load of 16,000 to 18,000 pounds. With a tractor semi-trailer combination with three axles the concrete pavement will support approximately 40,000 pounds gross; the front axle of the tractor would bear 8,000 pounds, the rear axle of the tractor 16,000 pounds, and the rear axle of the semi-trailer 16,000 pounds. If another axle could be added to the vehicle 40 inches apart from any other axle and let it carry 16,000 pounds more, the gross load could be increased to 56,000 pounds without doing any additional damage to the pavement. He said in his opinion the roads he examined could carry that load (R. 126-127).

He further testified that figures for the whole country on accidents are the following: For passenger vehicles one accident including death or injury per 100,000 miles; for busses 2.66 such accidents; for intercity trucking 1.69 accidents; the accident ratio is higher for trucks engaged in local deliveries (R. 127-128).

Mr. Tucker stated that he considered that the concrete roads of South Carolina will carry the same loads as the North Carolina concrete roads. He said that the North Carolina roads (where the weight limitations are higher) are in much worse condition than those over which he traveled in South Carolina, but he does not consider the condition of the roads in North Carolina to be due to the heavy trucks; there are so many things that cause the deterioration of a concrete pavement that it is impossible to say it is due to this cause or that cause in any case. He would say in North Carolina there are sub-grade conditions quite different from the sub-grade conditions in South Carolina for one thing. From his observation the sub-grade conditions in South Carolina are most excellent. In North Carolina frost goes quite deep and that makes quite a difference as to the qualities of a concrete road. There isn't much depth to the frost in South Carolina (R. 129-130).

L. W. Teller, engineer employed by the Bureau of Public Roads, testified as a witness for the Interstate Commerce Commission. For 10 years he has been in charge of the Bureau's research in pavement design. The Bureau conducts research and tests and the results are published monthly in its research journal "Public Roads". He testified that the concrete pavement in South Carolina is of typical design; that the gross load is not a factor in the design of concrete paving, but that the critical factor is the wheel load. He expressed the opinion that the standard pavement roads in the State could safely bear a wheel load of 8,000 pounds, with proper pneumatic tire equipment (R. 133). He had no knowledge of the design of the roads and bridges in this State (R. 134). He further testified that the standard pavement roads were the only roads the strength of which could be determined by formula or test; the other types must be judged by observation and he does not know the weights that should be permitted

on them (R. 134). He would not say that a gross load limitation has no connection with the protection of the road, but did state that the 20,000 pounds limit, prescribed by the State statute, would likely limit the maximum wheel load on any type of vehicle to 8,000 pounds, and a few vehicles, loaded to their capacity, could probably carry a wheel load of 8,000 pounds. About one-third of the load is on the front end and two-thirds on the rear (R. 135).

R. W. Knowles, a transportation engineer for a manufacturer of trucks, testified that the tractor semi-trailer type of truck, used in interstate commerce today, is ordinarily designed to carry about 18,000 pounds per axle, or a little less. He expressed the opinion that gross weight does not in any way protect the highways (R. 119) nor was safety on the highways enhanced by such (R. 121). It was his opinion that 40,000 pound trucks could operate as safely as 20,000 pound trucks (R. 122).

C. B. Carley, a trailer salesman, found that he could not operate trucks to come within the limits of the South Carolina Act (R. 155); that South Carolina is the only State that did not permit a width of 96 inches or greater. The States of Florida and North Carolina have recently changed to conform (R. 155). He also stated that Tennessee, Kentucky, Alabama and Texas do not permit a ten ton pay load (R. 155), and expressed the opinion that the gross weight of 20,000 pounds does not relate to safety at all, and implied that the contrary was true (R. 155).

Appellees offered in evidence a portion of a proposed uniform act regulating traffic on highways, prepared and adopted by the National Conference on Street and Highway Safety, as published by the Bureau of Public Roads of the Department of Agriculture in 1934, prescribing that for motor truck vehicles wheel load *should not exceed* 8,000 or 9,000 pounds, and axle load should not exceed 16,000 or 18,000 pounds, depending upon whether the wheels are

equipped with high pressure or low pressure pneumatic tires (R. 277); and prescribing a width of 96 inches for such vehicles. They also offered in evidence along the same lines, recommendations of certain highway associations and others (R. 275-282).

On these issues, the appellants offered three witnesses: J. S. Williamson, Chief Engineer of the State Highway Department; Clifford Older, who originated the first formula used in the designing of concrete paving; and the statement of C. H. Moorefield (now deceased), Chief Highway Engineer from 1920 to 1935, under whom most of the South Carolina highways were constructed, and who testified in the investigation directed by the Legislature in 1931, before the present statute was enacted. Mr. Williamson testified as follows:

In the State highway system there are 2,417 miles of standard pavement, 1,724 miles of bituminous surface type, 1,141 miles of earth type, and 666 miles unimproved (R. 159). The concrete paving is 75 to 80 percent of the total, or 1,800 to 2,000 miles (R. 160). The bituminous surface type is an earth type road covered with an asphalt wearing surface about ¾ of an inch thick. The bituminous surface, earth type, and unimproved roads are quickly impaired and destroyed by heavy truck traffic (R. 161-162-170). There are sections of bituminous surface, earth type and unimproved roads on all roads throughout the State highway system. On some routes there are more weak places than on others (R. 163, 169, 170). There is no definite knowledge as to which roads are traveled most by heavy trucks (R. 163).

There are weak and narrow bridges in many places throughout the State highway system, one not capable of bearing safely more than two tons, one not more than five tons; and of the 50 miles of bridges in the system, 75% have been designed to carry a load not in excess of ten tons (R. 169, 170, 174). There are several bridges 18 feet wide

and one 15 feet wide (R. 164, 167). Trucks have broken floors on bridges from time to time and have knocked hand rails off very often (R. 181).

The load the concrete roads will bear is very indefinite. It depends on a number of different things. Subgrade conditions are a very big factor. Some concrete pavement in one section may hold up 100,000 pounds. The same identical pavement, as far as construction goes, may break up under a two or three thousand pound load. Those subgrade conditions often occur in short distances of one another on the same road (R. 160). Subgrade conditions are about the same in South Carolina as in North Carolina. There is sand subgrade along the coast, some gumbo sections, sand hills, mountainous sections and clay. Frost is sometimes deep enough to disturb some roads (R. 179).

On standard pavement throughout the State the limit of axle weight should be around 13,000 pounds, but there are roads for which that is too much. Greater axle weights are going over the roads now and some of the pavements are failing. Trucks and buses are one cause for such failure, and also subgrade conditions, floods and a little frost. A 16,000 pound axle load is apt to do some damage; the pavement may stand it for a good while but it is bound to break down earlier than if it had a lighter load (R. 187, 188, 195). Under good subgrade conditions the new pavement may support 18,000 pounds axle load but there are weak subgrade conditions, some in short distances of one another on the same roads. Assuming that 90 per cent of the road has no weak spots, axle loads of 12,000 or 13,000 pounds would be heavy enough (R. 179, 160, 182, 187, 189). Maintenance costs amount to one and three-quarter million dollars per annum, no part of which is contributed by the Federal Government (R. 197). The use of bridges for loads exceeding the weights for which they were designed, does not prove their strength (R. 184), and the same is true as to concrete

roads (R. 182, 197). The damage may show up later. Cities and towns of the State have suffered damage to their streets due to the heavy truck traffic (R. 168, 169, 172). Most of these streets were designed only for passenger vehicle traffic (R. 169). The State departed from building standard concrete roads on account of lack of funds, and went to cheaper construction so that they could get people out of the dust and mud (R. 161). (End of Mr. Williamson's testimony.)

Mr. C. H. Moorefield, Chief Engineer of the South Carolina State Highway System prior to July 15, 1935, (now deceased), recommended to the Legislature in 1931 that the truck weight limitation be lowered.

In 1931, the Legislature authorized a committee to investigate motor transportation, and the report of that committee was admitted in evidence (R. 175-176). On November 10th, 1931, Mr. Moorefield appeared before that committee, presented a prepared statement which he had previously submitted as testimony before the Railroad Commission of South Carolina on February 4th, 1931, Exhibit 8 (R. 255-261), and presented also a prepared statement for the investigating committee, Exhibit 9 (R. 261-265). Exhibit 10 is a part of the report of the investigating committee containing their report of Mr. Moorefield's testimony. He stated that if the highways could be designed for a maximum vehicle load not exceeding four tons, which would take care of the ordinary truck having two tons capacity, the average cost per mile of construction would be reduced by at least $3,000 and probably more. The total number of trucks registered for more than two tons capacity plus all busses is about one per cent of all vehicles registered, while the additional $3,000 per mile of highway construction cost in order to provide for this one per cent amounts to 15 per cent of the average per mile construction cost. This means that the State is expending $18,000,000 to accommodate

3,000 vehicles and combinations of vehicles (R. 256-257). Roads which have a small volume of truck traffic have a much lower maintenance cost than roads where there is a large volume of truck traffic (R. 257). Damage caused roads by vehicles is out of proportion to the weight of the vehicles; that is, a five-ton truck will do more than five times the amount of damage that a one-ton truck will do (R. 258). The large and heavy trucks appear to be involved in proportionately more accidents than ordinary vehicles and interfere to a marked extent with the free use of the highways by other vehicles (R. 258-259); they enhance the problem of traffic out of all proportion to the relative number of such vehicles; that even on our 20 foot pavements the average driver of an automobile hates to meet a bus or a large truck and is conscious of being crowded to one side whenever he passes one (R. 259). He recommended to the Legislature that no vehicle with a load capacity greater than five tons should be permitted to be registered (R. 264). The increasing bus and truck traffic is objectionable to the great majority of highway users and the South Carolina highways are not in shape to bear all of the traffic that would be thrown upon them if legislative action encouraged further even gradual substitution of highway carrier service for rail service.

Clifford Older, of Chicago, consulting engineer, testified for appellants as follows:

He was employed by the Illinois Highway Department as an engineer from 1906 to 1917, and as Chief State Highway Engineer from 1917 to 1924. He conducted a test of concrete pavements, known as the Bates test, and devised the first practical formula for concrete pavement design (R. 232). There is no formula to test the strength of any road except a concrete road (R. 239). It is impossible to tell the strength of concrete pavement merely by looking

at it, even though its thickness and width is known. Concrete pavements of the same thickness vary considerably in bearing power. The soil on which it is laid has a good deal to do with it (R. 233-234). A concrete pavement should not bear weight of more than fifty per cent of the ultimate bearing strength. If the stress is ninety per cent the failure will appear almost immediately. If the load stress is a little over fifty per cent, say fifty-five per cent, the failure will not result for a number of years. Stresses of sixty per cent of the ultimate bearing strength cause the road to break within a comparatively short time (R. 235).

The strength of subgrade varies in different parts of the State and even in the same territory approximately. It varies at short intervals along the particular piece of road (R. 235).

Part of the South Carolina concrete pavement does not have longitudinal joints. Pavements having a center thickness of 6½ inches with no longitudinal joint are the weakest in the State. Nature will put a longitudinal crack in it which will separate during low temperature periods. This leaves an unsupported edge 6½ inches thick exposed to the wheels of traffic. Pavements of this kind are not capable of supporting indefinitely wheel loads in excess of 4,200 pounds or axle loads in excess of 8,400 pounds. Pavements having an 8 inch edge thickness, 7½ inch center thickness, and transverse joints should not bear greater wheel loads than 6,400 pounds or axle loads of 12,800 pounds; that is the actual load supporting capacity of the best type of concrete pavement in the State (R. 237-238).

The maximum axle load of 18,000 pounds permitted in many States is an excessive load. In the State of Illinois he built $100,000,000.00 worth of pavement designed to carry a 16,000 pound axle load, 8,000 pound wheel load. Many of those pavements have gone to pieces under such loads, they have been destroyed by the travel. Some of

those roads so destroyed were of approximately the same construction as the South Carolina roads (R. 238). Some are still in service. The witness stated that the whole time he was with the Illinois Highway Department, solid tires were used on those roads, but he observed that the destructive effect of the loads (on the roads) continued just the same after pneumatic tires came into use and, in his judgment, the use of solid tires, as contrasted with the use of pneumatic tires, had nothing to do with the deterioration of the highways (R. 249-250). That is why he wants to be conservative in estimating the bearing strength of a pavement (R. 238). Bituminous surface and earth type roads should be restricted to the use of the average passenger car or truck of equivalent weight and tire equipment (R. 239-240).

The weight of a vehicle has direct relation to its safety. Even though a heavy truck can stop in the same distance as a light car, if both going at the same speed should strike an object, the damage done by the heavier vehicle will be in proportion to its weight as compared with the light vehicle (R. 240).

The width of a vehicle is a factor in the difficulty of passing it from the rear. Where a vehicle is in front of you it is easier to see ahead past the left edge of that vehicle where it is narrow than where it is wide. The angle of vision ahead is cut off in proportion to the width of the vehicle ahead. Six inches in the width of a truck would make a great difference.

The gross load limitation of 20,000 pounds is decidedly generous for the roads of this State. The gross load limitation has relation to the preservation and protection of the highway. If commercial vehicles have three axles the 20,000 pounds gross weight limitation would put the axle weights down to reasonable limits with respect to the

carrying capacity of the roadways of the State. It is difficult to enforce highway laws. A gross load limitation law is easier to enforce than an axle load limitation. For a part of the time while he was Illinois State Highway Engineer he had the direction of the highway police and both methods of enforcement were tried (R. 244). This witness did not agree with any statement that the main standard highways of South Carolina would carry axle weights of 18,000 pounds (R. 250). He stated: "In my experience as an engineer in the years past, working for the State of Illinois, I have never contemplated that the roads of this country would be subjected to the burdens that are now being imposed on them by heavy trucks" (R. 242-243). (End of Mr. Older's testimony.)

Specifications of Errors.

(With Respect to the Motion to Dismiss.)

1. The District Court erred in denying defendants' motion to dismiss the bill.

2. The District Court should have held, on defendants' motion to dismiss the bill, that the facts alleged in the bill, taken in connection with facts judicially known to the Court, failed to establish that the contested weight and width limitations of the South Carolina statute were unreasonable and did not bear a direct and substantial relation to the preservation of the highways and to the safety of other travelers making a normal use thereof, and should have held that they affected interstate commerce only incidentally, and should have dismissed the bill.

(With Respect to Findings of Fact.)

3. The District Court erred in its finding of fact numbered 17, wherein it found, with reference to the 2417 miles

of standard pavement roads in South Carolina, that "All such pavement is capable of sustaining without injury a wheel load of 8,000 to 9,000 pounds or an axle load of 16,000 to 18,000 pounds, depending upon whether the wheels are equipped with high pressure or low pressure pneumatic tires.", in that such finding is not justified by the evidence.

4. The District Court erred in its finding of fact numbered 18, wherein it found, with reference to the standard paved roads of South Carolina, that they "are capable of carrying the commerce which has been developed by modern truck transportation; that federal highways numbered 1, 15-A, 17, 21, 25, 29 and 52 comprise the great arteries of interstate commerce through the state of South Carolina, are of standard concrete paving as above described, with (fol. 109) the exception of a few short stretches, a few miles in length which are not of sufficient importance to justify the denial of the use of these arteries of commerce for the purpose for which they were constructed.", in that (1) such finding is not justified by the evidence, and (2) there is no substantial or specific evidence to show that the weak sections of roads excepted in this finding are either few in number or only a few miles each in length.

5. The District Court erred in its finding of fact numbered 19, wherein it found, with reference to bridges on the highway system of South Carolina, "that there are a few old bridges on the main arterial highways above mentioned and also on the other roads paved with standard concrete paving which were not designed for carrying trucks of greater weight than 20,000 pounds and a few which are too narrow to permit the use of trucks 96 inches in width, and as to these the provisions of the law cannot be deemed unreasonable; but that, as these bridges are few in number and it would be unreasonable to exclude interstate commerce from the entire highway system on their account, such of

them as are considered by the State Highway Department to be unsafe for use by trucks of greater width than 90 inches or greater weight than 20,000 pounds should be so marked so as to afford ample warning that the use of the bridge is forbidden to trucks of that size and weight.", in that (1) the evidence fails to establish that the old bridges, not designed for carrying trucks of greater weight than 20,000 pounds and too narrow to permit the use of trucks 96 inches in width, were few in number; and (2) the evidence does not justify the Court in assuming the prerogative of imposing conditions upon which the sovereign State may enforce an admittedly valid statute.

6. The District Court erred in its finding of fact numbered 20, wherein it found "That the effect on the highways and bridges of the state of South Carolina of a tractor-(fol. 110) semi-trailer combination is not different from the effect produced by two vehicles of equal weight, one following the other; and that the provision requiring that the tractor-semi-trailer combination be considered as one unit for the application of the weight limitation is unreasonable.", in that such finding is not justified by the evidence.

7. The District Court erred in its finding of fact numbered 21, wherein it found "That the rigid type highways of the state of South Carolina are typical of the design of the highways of that type in a great majority of the states in the United States today, and that they will permit axle loads of 16,000 to 18,000 pounds to be hauled thereon without damage to said highways. That they have been subjected to the traffic of heavy trucks with gross weights in excess of 20,000 pounds and other vehicles since 1930 and are now being subjected to such traffic and there is no evidence of deterioration thereof as a result of such traffic except in isolated instances due to unusual conditions.", in that (1) such finding is not justified by the evidence, and (2)

there is no material or definite evidence in the record that such highways have been subjected to the traffic of heavy trucks with gross weights in excess of 20,000 pounds and other vehicles since 1930; and (3) there is a failure of evidence to prove that there was no substantial deterioration of such highways as the result of such excessively heavy traffic.

8. The District Court erred in its finding of fact numbered 22, wherein it found "That gross weight of vehicles is not a factor to be considered in the preservation of concrete highways, but wheel or axle weight; that vehicles engaged in interstate commerce are so designed and the pressure of their weight is so distributed by their wheels and axles that heavy gross loads can be carried over concrete roads without damage to the concrete surface; and that a gross weight limitation of 20,000 pounds is unreasonable as a means of preserving the highways", in that (fol. 111) (1) such finding is not justified by the evidence, and (2) a gross weight limit is reasonable and easy of enforcement.

9. The District Court erred in its finding of fact numbered 23, wherein it found "That the gross load limitation has no reasonable relationship to the safety of the public using the highways; that the modern type vehicles engaged in interstate commerce are safer on the highways than the overloaded light trucks which would result from enforcement of the gross load limitations, because they make possible a better distribution of weight and have better braking equipment", in that (1) such finding is not justified by the evidence, and (2) the Court wrongfully assumes, as a premise of its finding, that light trucks will be overloaded in violation of the law.

10. The District Court erred in its finding of fact numbered 24, wherein it found "That the width limitation of

90 inches is unreasonable when applied to the standard concrete highways of the State and the arteries of interstate commerce heretofore mentioned, in view of the fact that all other States in the Union permit a width of 96 inches, this is the standard width of trucks engaged in interstate commerce, and the enforcement of the 90 inch limitation would exclude from the highways a large portion of the equipment now used in interstate commerce without material advantage to the safety or preservation of the highways", in that the finding is not justified by the evidence.

11. The District Court erred in its finding of fact numbered 26, wherein it found that the weight and width limits imposed by the statute "* * * are unreasonable restrictions when applied to the highways heretofore mentioned which constitute the great arteries of interstate commerce of the state and the other standard concrete highways constituting a part of the state highway system; and that as applied to said highways they constitute an unreasonable restriction and burden on interstate commerce; * * *", in that such finding is not justified by the evidence.

(fol. 112) 12. The District Court erred in its finding of fact numbered 27, wherein it found "That the enforcement of the said provisions of the act against the plaintiffs while they are engaged in interstate commerce would in large measure destroy their interstate business, would subject them to ruinous penalties if they should attempt to carry on said business, and would otherwise inflict upon them great and irreparable injury", in that such finding is not justified by the evidence.

(With Respect to Findings of Fact in Opinion.)

13. The District Court erred in finding as a fact in its Opinion (typed page 13), with reference to the effect of heavy traffic on the streets of towns and cities of the State,

that "There is no showing, however, that there has been substantial damage to any streets as a result of the heavy traffic which has been passing over them for the past five years, and no reasonable ground to apprehend such damage in the future", in that (1) such finding is not justified by the evidence, (2) there is no substantial or definite evidence negativing substantial damage to such streets, and (3) the Court shifts the burden of proof from plaintiffs to defendants.

14. The District Court erred in finding as a fact in its Opinion (typed page 21) "Here we have a connected system of standard highways of the finest character; and there is no reasonable relation between the limitations complained of and the preservation of safety of such highways. In the light of experience and of scientific knowledge, there is no ground for reasonable difference of opinion as to the gross load limitation of 20,000 pounds not being necessary for the protection of such roads themselves, and there is even less justification for the requirement that the tractor-semi-trailer combination be counted one unit for the purpose of computing gross load. So far as safety is concerned, the evidence shows clearly that there is less danger to traffic from the standard trucks of interstate com-(fol. 113)merce than from smaller trucks carrying a load for which they are not designed; and certainly there is not enough advantage in a 90 over a 96 inch width to justify the exclusion from an 18 or 20 foot highway of trucks of a width permitted by all other states of the Union", in that (1) such finding is not justified by the evidence, and (2) is contrary to the light of experience and scientific knowledge in such respect; and (3) the Court assumes that smaller trucks will be overloaded in violation of law.

(With Respect to Facts that Should Have Been Found.)

15. The District Court should have found as a fact that the contested weight and width limitations of the South Carolina statute were reasonable and bore a direct and substantial relation to the preservation of the highways and to the safety of other travelers making a normal use thereof, and that they affected interstate commerce only incidentally.

16. The District Court should have found as a fact that there was a substantial and material difference of opinion and judgment on the factual question whether the contested weight and width limitations of the South Carolina statute were reasonable and bore a direct and substantial relation to the preservation of the highways and the safety of other travelers making a normal use thereof, and affected interstate commerce only incidentally.

17. The District Court should have found as a fact that the contested weight and width limitations of the South Carolina statute were not an unreasonable burden on interstate commerce, and affected it only incidentally.

18. The District Court should have found as a fact that the highway system of South Carolina was constructed by the State, as its own property, with its own funds, excepting only those obtained from federal aid, and was intended, designed and constructed only for passenger automobiles and light traffic in trucks, and that the enormous increase in heavy truck traffic, which has since developed, and the use of the highways for substantial and heavy traffic in (fol. 114) heavy trucks, has and will materially damage them.

(With Respect to Conclusions of Law.)

19. The District Court erred in its conclusion of law numbered 1, that the weight and width limitations of the

South Carolina statute are an unreasonable burden on interstate commerce when applied to trucks operating on the designated and standard concrete highways of South Carolina, in that the evidence and facts judicially known show such limitations to be a valid exercise of the police power of the State as to such designated and standard concrete highways, and that they affect interstate commerce only incidentally.

20. The District Court erred in its conclusion of law numbered 5, to the effect that plaintiffs are entitled to injunctive relief restraining defendants from enforcing the weight and width limitations of the statute while plaintiffs are engaged in interstate commerce upon the designated highways and standard concrete highways of South Carolina, in that (1) the evidence and facts judicially known show such limitations to be a valid exercise of the police power of the State as to such designated and standard concrete highways, affecting interstate commerce only incidentally, and (2) the Court should have limited the injunctive relief to trucks not exceeding the weight limits which the Court itself found to be reasonable and proper maximum weight limits.

21. The District Court should have concluded that the contested weight and width limitations of the South Carolina statute were a valid exercise of the police power of South Carolina and not an unreasonable burden on interstate commerce as to plaintiffs.

22. The District Court having concluded (conclusion of law numbered 4) that the weight and width limitations of the South Carolina statute are not violative of the due (fol. 115) process and equal protection clauses of the Fourteenth Amendment, erred in concluding (conclusion of law numbered 1) that the same limitations, in the same circumstances, are violative of the commerce clause of the Fed-

eral Constitution, in that the latter conclusion is repugnant to and inconsistent with the former.

23. In its consideration of the evidence and facts within judicial knowledge, the District Court throughout the case misapplied the rule that plaintiffs bore the burden of proving that the contested weight and width limitations of the South Carolina statute were unreasonable and arbitrary and had no direct or substantial relation to the preservation of the highways or the safety of others making a normal use thereof, and cast upon the defendants the burden of proving the negative of such propositions.

(With Respect to Decree.)

24. The District Court erred in enjoining defendants (Decree, Section 1) from enforcing against plaintiffs while engaged in interstate commerce on the highways of the State of South Carolina numbered 1, 15-A, 17, 21, 25, 29 and 52, or on such portions of other federal aid highways as may be of standard concrete or concrete and asphalt construction, the contested weight and width limitations of the South Carolina statute, in that they are a valid exercise of the police power of South Carolina, affecting interstate commerce only incidentally, and are not an unreasonable burden on such commerce.

25. The District Court erred in enjoining defendants (Decree, section 1) from enforcing against plaintiffs while engaged in interstate commerce on the highways of the State of South Carolina numbered 1, 15-A, 17, 21, 25, 29 and 52, or on such portions of other Federal aid highways as may be of standard concrete or concrete and asphalt construction, the contested weight and width limitations of the South Carolina statute, without limiting the protection of the injunction to trucks with a wheel load not exceeding (fol. 116) 8,000 to 9,000 pounds, or an axle load not

exceeding 16,000 to 18,000 pounds, depending upon whether the wheels are equipped with high pressure or low pressure pneumatic tires, in accordance with its finding of fact numbered 17.

26. The District Court, having found as a fact in its Opinion (typed page 12), with reference to the development of modern transportation units, that "* * *. with this modern equipment it is possible to move a heavily loaded truck over the highway with no greater injury to the modern standard pavement than would result from the movement over it of an ordinary passenger car", erred in not limiting the protection of its injunction to modern equipment, of such a character and having such non-injurious effect on the standard pavement.

27. The District Court erred in substituting its judgment as to the weight and width limits of trucks necessary to preserve and promote safety on highways numbered 1, 15-A, 17, 21, 25, 29 and 52, and on such portions of other Federal aid highways as may be of standard concrete or concrete and asphalt construction, for the judgment of the Legislature of South Carolina in this respect, when the evidence showed a dispute among fairminded men as to necessary and proper weight and width limits, thereby usurping the prerogative of the State of South Carolina.

28. The District Court erred (Decree, section 2) in conditioning the right of the State of South Carolina to enforce its statute (admittedly valid) as to bridges too weak and too narrow, upon the erection of signs at such bridges, and the enforcement of the valid law with reference thereto, thereby usurping the prerogative of the sovereign State of South Carolina.

29. The District Court erred in its Decree (section 1) in that the effect of the injunction granted is that the sover-

eign State of South Carolina must classify the highways of the State Highway System for the purpose of enforcing its valid police regulations, first, as between Federal aid high- (fols. 117-127) ways and non-Federal aid highways; second, as between specified highways extending as units across the State and other highways of the State Highway System; and, third, as between sections of highways paved with standard pavement and other sections of the same highways of different construction.

30. The District Court erred in not holding that the State of South Carolina built its highways with its own money, except for some funds received from Federal aid, that it owns them and has the right to use them, and has the absolute right to fix the limits on weight and width of vehicles which may be operated thereon; and that the District Court was without authority to supplant the judgment of the General Assembly of South Carolina as to the proper weight and width limits of vehicles using such highways.

Summary of Argument.

I.

The District Court should have held, as a matter of law, the statute is a valid exercise of the State's police power and is not subject to judicial restraint.

II.

The evidence of record and facts of which the Court may take judicial notice compel the conclusion that the assailed provisions of the statute constitute a reasonable exercise of the State's reserved police power for the purpose of providing protection for the highways and of promoting public safety and convenience.

1. The weight of the evidence in regard to which there is a conflict does not support the Court's conclusion that

the Act is unreasonable as to the roads subject to the decree.

(a) The weight of the evidence as to the ability of the pavements to bear wheel loads of 8,000 to 9,000 pounds does not support the Court's conclusion in that respect, which was its basis for concluding that the gross load limitation is unreasonable, and the conflict in the evidence was such as to leave a fairly debatable question.

(b) The evidence of record and evidence and facts of which the Court may take judicial notice show a real, direct and practical relationship between the 20,000 pounds weight limitation, as applied to both single units and combinations, and the preservation of concrete pavements in South Carolina, and show such limitation to be proper.

(c) The facility of compliance with a gross load limitation justifies it as a valid measure, preferable to a wheel load limit, since it bears a practical relationship to the protection of the pavement.

(d) An absolute and independent justification of the South Carolina gross load limitation exists in the varying subgrade conditions found.

(e) The provision in Section 2 that a tractor-semitrailer combination shall be considered as one vehicle for the purpose of the 20,000 pounds gross weight limitation, is valid.

(f) The width limitation of ninety inches is valid.

2. The decree was based upon the premise that there is a well connected system of concrete roads in South Carolina and the record does not show that such well connected system exists.

3. The statute is reasonable and necessary as a means of protecting all of the highways and bridges in the State and as a means of promoting safety in their use and the Court erred in holding it unreasonable because it had concluded that it was unreasonable as applied to vehicles on a limited portion of the State's highways.
4. Crediting appellees' evidence with all the effect which may properly be attributed to it, the reasonableness of the statute remains a fairly debatable question which should have been left to the Legislature.

III.

The Court's conclusions as to the invalidity of the statute are erroneous because based upon improper tests of reasonableness.

IV.

The District Court had no power to classify the roads and bridges or to rewrite the width limit as those are legislative functions; and lacking such power the Court was required under the evidence and applicable law to hold the entire statute valid as to all roads and bridges.

ARGUMENT.

I.

The District Court should have held, as a matter of law, the statute is a valid exercise of the State's police power and is not subject to judicial restraint. (Assignment of Errors Nos. 1, 2, 19, 24, 30).

The nature of the statute is such as to clearly show that it was enacted as a police measure to preserve the highways and to promote safety in their use. The declaration of policy set forth in Section 1 (Appendix 1, p. 146) ex-

pressly states the legislative intent in that respect. Such action provides:

> "SECTION 1. *Public Policy.*—Be it enacted by the General Assembly of the State of South Carolina: It is hereby declared to be the public policy of this State that heavy motor trucks, alone or in combination with other trucks, increase the cost of highway construction and maintenance, interfere with and limit the use of the highways for normal traffic thereon, and endanger the safety and lives of the traveling public, and that the regulations embodied in this Act are necessary to achieve economy in highway costs, and to permit the highways to be used freely and safely by the traveling public."

It is well settled that if there is a real, substantial, or even reasonably conceivable relationship between the statute, as a means, and a legitimate end sought to be attained by its effect, the statute is a reasonable and valid exercise of the State's police power. The statute in question shows on its face that there is not only a real and substantial but an *obvious* relationship between the gross weight and width limitations of motor vehicles and the damage they do to public highways and the danger and inconvenience to those who use them. The assailed limitations are such as to show on their face, under controlling decisions of this Court, that they are a reasonable exercise of the State's admitted police power. The lower Court should have sustained the statute without hearing appellees' evidence and, failing that, should have dismissed appellees' bill at the conclusion of their evidence as none of it was sufficient to distinguish this case from those previously decided by this Court.

Decisions of this Court have clearly established the principles which are applicable and controlling in the instant case.

Morris v. *Duby*, 274 U. S. 135;
Sproles v. *Binford*, 286 U. S. 374;
Stephenson v. *Binford*, 287 U. S. 251;
N. Y., N. H. & H. R. Co. v. *New York*, 165 U. S. 628;
Bradley v. *Public Utilities Commission*, 289 U. S. 92;
Silz v. *Hesterberg*, 211 U. S. 31;
Hudson County Water Co. v. *McCarter*, 209 U. S. 349;
Geer v. *Connecticut*, 161 U. S. 519.

The District Court, while realizing to some extent the importance of *Morris* v. *Duby* and *Sproles* v. *Binford* (R. 75), finally failed to understand their true meaning. The District Court clearly did not comprehend that the facts and conditions present in those cases, and the contentions made by the plaintiffs, were substantially the same as here.

In *Sproles* v. *Binford, supra* (286 U. S. 374), a Texas law fixed a seven thousand pound net load limitation. The opinion in that case answers every claim made by appellees here. See especially pp. 388, 390, 394. Furthermore we have examined the record and briefs filed here in that case. The plaintiffs' evidence there was precisely similar to appellees' here, and was the following: (1) That the Texas seven thousand pounds net load limitation law repealed a previous law which had permitted a thirty thousand pounds gross load provided the axle load did not exceed sixteen thousand pounds. (2) Several engineers, one from the U. S. Bureau of Public Roads, testified that a net load limitation has no relation to highway preservation; that the Texas law is unreasonable and arbitrary in that highway damage can be prevented only by laws prescribing maximum wheel and axle weights; that the repealed law adequately protected the highways and was similar to the laws of most of the other states. The testimony of Thomas H. MacDonald, Chief of the United States Bureau of Public Roads, before the Interstate Commerce

Commission, shown in the Record in the instant case, p. 281, was also introduced in the *Sproles* case. All of the expert engineering evidence introduced by appellees in the instant case was duplicated in the *Sproles* case, but in the *Sproles* case more engineers testified and the evidence went further than in the present case. (3) That the enforcement of the Texas law will cause great loss to motor vehicle carriers and shippers. The District Court in Texas found that the carriers who had operated in interstate commerce profitably under the old law could not operate their vehicles under the seven thousand pounds net load limitation except at a loss; that trucks usable in neighboring states could not be used in Texas, necessitating transfer of the cargo to smaller trucks at the border.

In response to these claims of plaintiffs in the *Sproles* case this Court said (pp. 388-390):

> "Limitations of size and weight are manifestly subjects within the broad range of legislative discretion. To make scientific precision a criterion of constitutional power would be to subject the State to an intolerable supervision hostile to the basic principles of our Government and wholly beyond the protection which the general clause of the 14th Amendment was intended to secure. Ohio Oil Co. *v.* Conway, 281 U. S. 146, 159. When the subject lies within the police power of the State, debatable questions as to reasonableness are not for the Courts but for the legislature, which is entitled to form its own judgment, and its action within its range of discretion cannot be set aside because compliance is burdensome."
>
> * * * * * * *
>
> "The objection to the prescribed limitation as repugnant to the commerce clause is also without merit. The Court, in Morris *v.* Duby, supra (274 U. S. 143), answered a similar objection to the limitation of weight by the following statement, which is applicable here:

'An examination of the acts of Congress discloses no provision, express or implied, by which there is withheld from the State its ordinary police power to conserve the highways in the interest of the public and to prescribe such reasonable regulations for their use as may be wise to prevent injury and damage to them. In the absence of national legislation especially covering the subject of interstate commerce, the State may rightly prescribe uniform regulations adapted to promote safety upon its highways and the conservation of their use, applicable alike to vehicles moving in interstate commerce and those of its own citizens.' In the instant case there is no discrimination against interstate commerce and the regulations adopted by the State, assuming them to be otherwise valid, fall within the established principle that in matters admitting of diversity of treatment, according to the special requirements of local conditions, the States may act within their respective jurisdictions until Congress sees fit to act. Minnesota Rate Cases (Simpson *v.* Shepard, 230 U. S. 352, 399, 400). As this principle maintains essential local authority to meet local needs, it follows that one State cannot establish standards which would derogate from the equal power of other States to make regulations of their own.''

Particular attention is called to the fact that *Morris* v. *Duby* was decided on motion to dismiss, that no evidence was submitted and that the conclusions of this Court were based upon the face of the order of the Oregon Highway Commission. In both *Morris* v. *Duby* and *Sproles* v. *Binford* the gross weight of vehicles and combinations was limited to an amount *less* than that permitted by the statute in this case. Interstate commerce was involved which was carried on over Federal Aid roads.

The case of *N. Y., N. H. & H. R. Co.* v. *New York, supra*, is persuasive on the immediate point under discussion. There a New York statute prescribed the manner in which railroad passenger cars used within New York, both in intrastate and

interstate commerce, should be heated. In that case the Court said:

> "The statute in question had for its object to protect all persons traveling in the State of New York on passenger cars moved by the agency of steam against the perils attending a particular mode of heating such cars. There may be reason to doubt the efficacy of regulations of that kind. But that was a matter for the State to determine. We know *from the face of the statute* that it has a real, substantial relation to an object as to which the State is competent to legislate, namely, the personal security of those who are passengers on cars used within its limits." (Italics ours.)

In *Bradley* v. *Public Utilities Commission,* 289 U. S. 92. The Court held a State had power to bar an interstate motor vehicle carrier from the use of a certain highway to avoid traffic congestion. While the opinion states that the motor carrier had failed to show that no other route was open to him, a careful reading of the Court's opinion makes it plain that the decision did not turn on that point; what the Court did was to broadly sustain the power of a State over interstate commerce in the interest of highway safety. The Court distinguished cases in which it had held invalid State laws intended as regulations of the business of those using in interstate commerce the highways and made clear the distinction between such commercial regulation of interstate commerce and regulation by a State in the interest of highway safety. The Court said:

> "In the case at bar, the purpose of denial was to promote safety; and the test employed was the congestion of the highway. *The effect of the denial upon interstate commerce was merely an incident.*" (Italics supplied.)

Other cases not involving highway conservation laws directly support the foregoing cases in principle. In *Silz* v. *Hesterberg, supra* (211 U. S. 31), a law forbade the posses-

sion of game birds during the closed season in New York, whether killed within the state of New York or elsewhere. The defendant was convicted of possessing game birds killed in Russia during the open season there and imported to New York during the New York open season, but retained by him during the closed season in New York. It was admitted that the imported birds were readily distinguishable both while feathered and otherwise from any game birds native to New York. This Court nevertheless upheld the New York law on the principle, applicable here, that in the *safe-guarding of the State's property* the State legislature is the *sole judge of the necessity or expediency of the means adopted,* assuming such means to have *any relation whatosever to the preservation of game in the State.* The Court said:

> "It is contended, in this connection, that the protection of the game of the state does not require that a penalty be imposed for the possession out of season of imported game of the kind held by the relator. It is insisted that a method of inspection can be established which will distinguish the imported game from that of the domestic variety, and prevent confusion in its handling and selling. That such game can be distinguished from domestic game has been disclosed in the record in this case, and it may be that such inspection laws would be all that would be required for the protection of domestic game. But, subject to constitutional limitations, the legislature of the state is authorized to pass measures for the protection of the people of the state in the exercise of the police power, and is itself the judge of the necessity or expediency of the means adopted. In order to protect local game during the closed season it has been found expedient to make possession of all such game during that time, whether taken within or without the state, a misdemeanor."

See also *Hudson County Water Co.* v. *McCarter,* 209 U. S. 349, *Geer* v. *Connecticut,* 161 U. S. 519.

The Court's particular attention is called to the case of *State ex rel. Daniel* v. *John P. Nutt Co.*, 180 S. C. 19, 185 S. E. 25, certiorari denied 297 U. S. 724. In the *Nutt* case the statute here involved was assailed as violative of the due process and equal protection clauses of both the State and Federal Constitutions and the Commerce Clause of the latter. The South Carolina Supreme Court, without hearing evidence on the question of reasonableness said at page 29 of its opinion:

> "That there is a direct relation between the weight and size of motor vehicles and the consequent damage to the highways resulting from their use, and the consequent danger to others from their operation, is no longer open to controversy, and reasonable regulations in this respect are within the police power and entirely within the legislative domain.
>
> "The Court here judicially knows that the facts exist, bringing the legislative power into play."

The lower court in this case expressly agreed with the State Supreme Court in its conclusion that the statute does not violate the 14th Amendment of the Federal Constitution. From this conclusion the appellees did not cross appeal. This Court in the *Sproles* case concluded that the Act did not violate the 14th Amendment. The State Supreme Court, in the *Nutt* case, after concluding that these regulations of size and weight did not violate the 14th Amendment, said:

> "It is recognized that the commerce clause of the Federal Constitution goes merely to the extent of inhibiting such regulations as result in discrimination against motor vehicles used in interstate commerce, and does not restrict the state in the exercise of its police power in this respect, so long as the statute applies equally to all."

This is in accordance with the decisions of this Court in the case of *Hendrick* v. *Maryland*, 235 U. S. 610, 622, *Sprout*

v. *South Bend*, 277 U. S. 163, 169, and *Continental Baking Company* v. *Woodring*, 286 U. S. 352, 365.

In *Hendrick* v. *Maryland, supra*, this Court said:

> "In the absence of national legislation covering the subject a state may rightfully prescribe *uniform* regulations necessary for public safety and order in respect to the operation upon its highways of all motor vehicles —those moving in interstate commerce as well as others." (Italics supplied.)

In *Sprout* v. *South Bend, supra*, this Court said:

> "In the absence of federal legislation covering the subject the state may impose, even upon vehicles using the highways exclusively in interstate commerce, *non-discriminatory* regulations for the purpose of insuring the public safety and convenience." (Italics supplied.)

In *Continental Baking Company* v. *Woodring, supra*, this Court said:

> "Regulations to that end are valid as to intrastate traffic, and *where there is no discrimination* against the interstate commerce which may affect it do not impose an undue burden upon that commerce." (Italics supplied.)

This Court, in the *Sproles* case, after reaching the conclusion that the act in question did not violate the 14th Amendment, concluded therefrom that the Act did not violate the Commerce Clause conditioned however, on two separate provisos (1) That no Congressional legislation has superseded the State's power and (2) that there is no discrimination against interstate commerce.

In the *Sproles* case the Court held that in the absence of the above provisos the *nature of the regulations*, which were precisely of the same nature as those involved here, were such as pertain to "matters admitting of diversity of treat-

ment, according to the special requirements of local conditions," therefore leaving the power in the respective States to "act within their respective jurisdictions until Congress sees fit to act."

Concerning the first of the above provisos, in the *Duby* case, this Court predicated its decision upon the absence of "national legislation especially covering the subject of interstate commerce." This language was quoted by the Court in the *Sproles* case for the same purpose. Manifestly the Court, in using such language, in both cases had reference to the fact that there was no national legislation covering the *size and weight* of motor vehicles used in interstate commerce. It had reference to the well understood rule of supersession. For all of the reasons assigned by the lower Court in its opinion (R. 57 to 64, inc.) in support of its conclusion to that effect (Conclusion of Law No. 3) (R. 84) we submit there has been no supersession by the Congress in its enactment of the Motor Carrier Act, 1935, of any of the State's power in this respect. No such supersession occurred by the enactment of the Federal Highway Act as it was passed before either the *Duby* or the *Sproles* cases. It is a well established principle that where there is a partial occupancy of a field by the Congress and where there is no direct conflict between the Federal and the State legislation both may stand, that in order to bring about supersession the Congressional action must be upon the precise subject matter; and that in the absence of supersession Federal legislation cannot have the *slightest effect* on the State power.

Carey v. *South Dakota*, 250 U. S. 118;
Mintz v. *Baldwin*, 289 U. S. 346;
A. T. & S. F. R. Co. v. *Railroad Commission*, 283 U. S. 380;
Townsend v. *Yeomans*, No. 781, decided May 24, 1937, 81 L. Ed. (Adv.) 840, 847.

Concerning the second proviso, little need be said about the matter of discrimination against interstate commerce in this case. The statute shows on its face that it applies to interstate and intrastate commerce alike. Whether or not the statute operates to prevent equality of competitive opportunity between jobbers and others within the State and those situated in other states is immaterial, for if that constitutes discrimination at all, it is *not discrimination against interstate commerce.*

To sum up, we submit that the statute shows on its face that it is a measure adopted in the exercise of the police power, that from the nature of the limitations, from that which this Court judicially knows, under the rule established in the above cases, there is a direct relation between the statute and the end sought to be accomplished such as to preclude judicial interference; that the subject matter shows on its face that it lies within the field which admits of diversity of treatment according to local circumstances and that there is no discrimination against interstate commerce; and that as a matter of law there has been no supersession of the State's power to act in the premises. We therefore submit that *as a matter of law* the court should have held the statute valid, should have refused to receive appellees' evidence, and, failing that, should have dismissed appellees' bill at the conclusion of their evidence.

II.

The evidence of record and facts of which the Court may take judicial notice compel the conclusion that the assailed provisions of the statute constitute a reasonable exercise of the State's reserved police power for the purpose of providing protection for the highways and of promoting public safety and convenience.

There are approximately 60,000 miles of rural public highways in the State. About 6,100 miles of this have been

specially designated by statute as the State highway system. The State Highway Commission has no authority over any of the remaining mileage in the State, except for streets in towns of less than 2,500 population which form connecting links in the State system. There is also that which is known as the Federal Aid System. Such Federal Aid System constitutes the roads which have been set aside as those upon which Federal funds may be expended for improvement. All of the roads in such Federal Aid System are included within and are a part of the aforesaid State system but not all of the State system is included in said Federal Aid System.

Of the 6,100 miles in the aforesaid State system some 2,417 miles are surfaced with concrete or bituminous concrete. The remainder of the 6,100 miles is surfaced with some other material or not surfaced at all. Of the 2,417 miles surfaced with concrete and bituminous concrete 1,800 to 2,000 miles are of plain concrete and the remaining 417 to 617 miles are constructed with a concrete base covered with bituminous material and are called bituminous concrete.

The decree enjoins the enforcement of the Act as to traffic over highways numbered 1, 15-A, 17, 21, 25, 29, and 52. These numbered roads, for convenience, will hereafter be referred to collectively as the "definite segment." They comprise a total of about 1,134 miles. They are all part of the said State system. They are surfaced partly with concrete, partly with bituminous concrete, partly with bituminous materials on materials other than concrete, partly with macadam or sand-clay and some of such mileage is not surfaced at all. The decree also enjoins the enforcement of the Act against vehicles traveling on "such portions of *other Federal aid highways* as may be of standard concrete or concrete and asphalt construction." Such roads as may be included in the latter provision are not specific-

ally enumerated, and for convenience they will hereafter be referred to as the "indefinite segment." There is no way of definitely determining from the record the aggregate mileage in such indefinite segment. By deduction it is certain the aggregate mileage in *both* segments does not exceed about 2,775 miles and possibly less, dependent upon the explanation of appellees' exhibit 6 as will be hereafter discussed.

Appellees' case is based upon the assertion that the highways of the State are capable of sustaining, without injury or danger, loads greater and vehicles wider than those permitted under the statute. The court found (R. 84) that all provisions of the act are reasonable and not an undue burden on interstate commerce in so far as the 57,225 or more miles of roads not included in either the definite or indefinite segments are concerned, constituting about 96 per cent of all the mileage in the State. This 96 per cent includes some of the mileage in the State system and all of that not in such system.

The appellees did not appeal from any of the lower court's action. There is no conflict in the evidence with reference to the roads not included in the two segments. The only testimony as to the capacity or strength of any of the roads *other* than concrete or bituminous concrete or the effect of truck traffic upon them is that of J. S. Williamson (R. 161, 162, 170) and L. W. Teller (R. 134). Teller testified that as far as he knew the weight that can be permitted on pavement of the bituminous type cannot be determined analytically or by tests. Williamson's testimony to the effect that traffic by vehicles heavier than the ordinary automobile is damaging to types of surfacing other than concrete or bituminous concrete is not controverted.

The only reason given by the court for extending the effect of the injunction to the mileage of pavement within the definite segment which is surfaced with materials other

than concrete or bituminous concrete was that such mileage consisted of "a few short stretches, a few miles in length, which are not of sufficient importance" to justify the denial of their use by heavy vehicles (Finding of fact 18, R. 81). The only conflict in the testimony is with reference to the capacity or strength of concrete and bituminous concrete pavement. The lower court's decree rests entirely on its findings and conclusions with reference to such pavement.

It is to be kept in mind that the validity of the decree is not to be tested by determining whether there is evidence to support the findings *on which the decree is based.* The proper inquiry is whether there is adequate evidence to support the *action of the Legislature.* If there is it makes no difference that there is opposing evidence. This principle has been applied in numerous cases involving the constitutionality of laws enacted, as here, to effectuate State police power. This Court has reviewed the facts and reversed decrees of lower courts which failed to adhere to this rule. *Standard Oil Co.* v. *Marysville,* 279 U. S. 582; *Euclid* v. *Ambler Realty Co.,* 272 U. S. 365.

This test was also applied in *Sproles* v. *Binford, supra* (286 U. S. 374).

This rule applies to statutes assailed as violative of the Commerce Clause. *N. Y., N. H. and H. R. Co.* v. *New York,* 165 U. S. 628, p. 632; *N. C. and St. L. R. Co.* v. *White,* 278 U. S. 456, p. 459; *Silz* v. *Hesterberg,* 211 U. S. 31, p. 39; *McLean* v. *D. and R. G. R. R. Co.,* 203 U. S. 38, p. 54.

In addition to the foregoing, it is well settled that in cases in equity, even in private causes not involving the validity of statutes "findings may be revised at the instance of an appellant, if they are against the weight of the evidence," *Morley Construction Co.* v. *Maryland Casualty Co.,* 300 U. S. 185, 191. See also *United States* v. *Detroit Timber & Lumber Co.,* 200 U. S. 321; *Liberty Oil Co.* v.

Condon National Bank, 260 U. S. 235; *Radio Corporation* v. *Radio Engineering Laboratory*, 293 U. S. 1.

1. *The weight of the evidence in regard to which there is a conflict does not support the court's conclusion that the Act is unreasonable as to the roads subject to the decree.*

(a) The weight of the evidence as to the ability of the pavements to bear wheel loads of 8,000 to 9,000 pounds does not support the court's conclusion in that respect, which was its basis for concluding that the gross load limitation is unreasonable, and the conflict in the evidence was such as to leave a fairly debatable question (Assignment of Errors Nos. 3, 7, 8, 11, 16 and 23).

The court found the 20,000 pounds gross weight limitation unreasonable as to *concrete and bituminous concrete roads only*. Two findings of fact are stated to sustain this conclusion. They are (1) that wheel or axle weight is the only factor to be considered in the preservation of concrete highways, and, (2) that such pavements can safely bear wheel weights of 8,000 to 9,000 pounds and consequent axle weights of 16,000 to 18,000 pounds (Findings of Fact Nos. 17, 21, and 22, R. 81-83).

The court found the statute reasonable, however, as applied to all of the 57,000 miles of roads in the State not surfaced with concrete or bituminous concrete. The court thus held as against appellees' general prayer for injunction (R. 19) and showing as to the desirability of injunction as to all roads (R. 76-108, 145, 152, 153, 199), that a gross weight limitation statute is not *per se* unreasonable as an exercise of legislative discretion. What the court held was that a gross weight limitation is unreasonable

only when it unduly restricts the use of what the court conceived to be scientifically permissible wheel loads. This follows necessarily from the court's findings, conclusions and decree. Hence the court's conclusion that the 20,000 pounds gross weight limitation is unreasonable as to the concrete roads rests entirely upon its findings that such roads will safely bear wheel loads of 8,000 to 9,000 pounds and, therefore, the 20,000 pounds gross weight limitation is unreasonably restrictive.

It may be objected that the court's conclusion as to the unreasonableness of the gross weight limitation and as to the necessity of applying the wheel load test, in considering reasonableness, refers only to concrete roads, and that for entirely different reasons the court held the gross weight limitation reasonable as to non-concrete roads. Such objection would be without merit. *The only evidence on the point* shows wheel load to be one of the primary factors in relation to the preservation of non-concrete roads (R. 160, 162, 169, 170). The witness Williamson testified, regarding such flexible roads, that heavy traffic on such roads immediately caused failures and ruts would develop in the surfacing and that the wheels of the truck would sink down in there and that the shoulders would push up (R. 161-162). Reflection indicates that excessive wheel load (that is, excessive for the particular type of road) is more damaging to non-concrete than to concrete roads because the latter have beam strength which spreads the load over a larger area. In fact, the greater the beam strength the lesser the importance of wheel load as contrasted with gross load (see R. 170, 171).

To summarize, the court held the gross weight limitation unreasonable as to concrete pavements, only because the statute prevented the use of wheel loads of from 8,000 to 9,000 pounds, and held the statute not per se unreasonable

by concluding that it is reasonable as to roads capable of supporting lesser wheel loads. Therefore, the court's conclusion that the 20,000 pounds gross weight limitation is unreasonable rests directly on its erroneous conclusion that the concrete pavements will safely bear wheel loads of from 8,000 to 9,000 pounds.

If it is pertinent to the issues here we submit that an analysis of the evidence shows *first*, that the appellees failed to sustain the burden of proving that the concrete pavements here involved will safely bear wheel loads of 8,000 to 9,000 pounds, and that the weight of such evidence does not support the court's conclusion in that respect, and, *second*, that the evidence affirmatively shows a conflict on that point which was such as to show a fairly debatable question and to thus preclude judicial determination of the subject. From this we submit that, since the finding as to the ability of pavement to support wheel loads of from 8,000 to 9,000 pounds is the premise, and since the premise fails, the court's finding and conclusion, based on such premise, to the effect that the 20,000 pounds weight limitation is unreasonable as applied to traffic on concrete roads, is erroneous.

The witnesses Harry Tucker and L. W. Teller, both nonresidents of South Carolina, and familiar with the highways about which they testified only by reason of brief observation trips, testified that in their opinion the concrete highways would bear wheel loads of 8,000 to 9,000 pounds and axle loads of 16,000 to 18,000 pounds. They both testified that the gross weight of a motor vehicle had nothing to do with conserving the highway. Mr. Tucker testified that where axles are spaced forty inches apart each causes stress in the pavement independently of the other axles.

We desire to call to the court's attention at this time certain conclusions of the witness Teller published by him

in 1926 which appear to be contradictory of his testimony at this point. See footnote (1) below.[1]

Opposed to this testimony is the testimony of J. S. Williamson, the Chief Engineer of the South Carolina State Highway Commission (R. 158), the testimony of Clifford Older (R. 231), a consulting engineer, and the testimony of Charles H. Moorefield before a committee of the Legislature. Mr. Moorefield (now deceased) was for fifteen years prior to July, 1935, Chief Engineer of the South Carolina State Highway Commission. Mr. Older was referred to by Mr. Tucker as the originator of the Bates Road Test and as a prominent highway engineer. Mr. Older was from 1917 to 1924 Chief Highway Engineer of the State of Illinois, and since 1924 has been in consulting practice. The Bates Road Test conducted by him was one of the first

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[1] The proceedings of the Fifth Annual meeting of the Highway Research Board held at Washington, D. C., December 3 and 4, 1925, and published by the National Research Council in 1926, page 67, contain an article by Mr. Teller on "Stress Measurements in Concrete Pavements." This article states the results of an experiment conducted by him on a concrete test road near Harrisburg, Pa. The test pavement was supposed to have edges eight inches thick and center five inches thick, but the center on actual measurement was found to be nearer six inches thick. It was reinforced with steel at the corners and edges and provided with a tongue and groove type of longitudinal center joint. (South Carolina concrete pavement consists of two types with respect to thicknesses: 7½-6-7½ and 8-6½-8, R. 126; and only about 40 per cent of the concrete pavement has the center joint, and none is reinforced with steel, R. 178). The subgrade of this test pavement ranged from an old stone road to 4 inches of sand or cinders on a clay fill. Test was made of each of the sections of this road by a truck whose gross weight was 26,000 pounds, with a maximum wheel load of 9,000 pounds, which was run at its minimum speed along the outside edge of the pavement and along either side of the longitudinal joint three times only. The article states that this test indicated that the stress in the interior of the slab was not excessive under this 26,000 pounds load, but that "The stresses around the edges of the slab, caused by the 26,000 pound gross load, were sufficient in all sections to produce cracking in the extreme fibers of the concrete, but visible cracks did not appear." Apparently this test by Mr. Teller showed that a stronger pavement than the ordinary South Carolina concrete pavement was damaged by *three* trips over it of a truck with a little bit greater gross weight than that permitted by the law in question here.

practical tests of concrete pavement and as a result of that test he originated the first formula proposed for the *design* of concrete roads.

Mr. Williamson stated (R. 160) that the load concrete roads may safely bear is very indefinite. Subgrade conditions are a very big factor entering into it. Some concrete pavement in one section may hold up one hundred thousand pounds. The same identical pavement, as far as construction goes, may break up under a two or three thousand pound load. These subgrade conditions occur right along in the same territory, often in short distances of one another on the same road. Asked what axle weight he would recommend for the standard concrete pavement, he said an axle weight not exceeding around thirteen thousand pounds, and even with that there were concrete roads that would be too much for (R. 187). A sixteen thousand pound axle load will do some damage and is bound to break down a concrete pavement earlier than if it had a lighter load (R. 195). There have been some failures in concrete pavement. There have been quite a number of corner breaks all over the State. By corner breaks are meant breaks of the outer edge of two head joints. These are joints with expansion strip between them (R. 176). Pavement failures are due to trucks. Subgrade conditions, floods and frost are other causes. Mr. Older testified that the best type of concrete pavement in South Carolina should carry no heavier an axle load than twelve thousand eight hundred pounds. That this might be subject to a variation of 1,000 to 2,000 pounds either way. He testified that pavements without center joint are not capable of supporting indefinitely *axle* loads in excess of 8,000 to 8,400 pounds (R. 237). This testimony is not controverted and Williamson's testimony indicates that from 1,080 to 1,200 miles, or 60 per cent of all the concrete pavement in the State is pavement of this type (R. 178). Older also testified that the maxi-

mum axle load of eighteen thousand pounds prevailing in some States is excessive. He bases this answer on the fact that while he was Chief Engineer of the Illinois State Highway Commission he built $100,000,000.00 worth of pavement having the same thickness approximately as those in South Carolina, and that many of these pavements have failed under a sixteen thousand pound axle load. Many of these pavements have gone to pieces and required replacement. That is why he places the maximum axle load for South Carolina pavements at twelve thousand five hundred pounds (R. 238). He further stated that in his opinion a gross load limitation of twenty thousand pounds had relation to the preservation of the highways. He said, "The gross load limitation for the roads of South Carolina is decidedly generous." It is difficult to enforce axle load limits and is easier to enforce gross load limits (R. 242, 243). Mr. Moorefield recommended to the South Carolina Legislature in 1931 that the then existing maximum weight limitation (12½ tons for one vehicle, and 20 tons for a combination of vehicles operated as a unit, see Act No. 575, South Carolina Statutes of 1931, Appendix II, page 153 hereof) be changed so that the maximum load capacity authorized should be five tons (R. 264). The effect of such a change would be to limit gross loads to 20,000 pounds or less (R. 114-R. 139), and in 1933 the Legislature did adopt the 20,000 gross load limitation here under attack. It should therefore be kept in mind that in 1933 the South Carolina Legislature had before it the recommendation of a highly respected highway engineer whose reputation with the Bureau of Public Roads was "most excellent" (R. 134), and who had, in 1933, been Chief Engineer of the South Carolina State Highway Commission for 13 years (R. 158), that the truck weight limitation should be reduced. This evidence is of greatest weight in considering whether the action of the Legislature was arbitrary and unreasonable.

Mr. Moorefield's recommendation was based upon his observation during his many years of service that heavy trucks damage the highways, and that the damage increases progressively and not proportionately as the weight increases (R. 255-270).

At this point we have the testimony of two non-residents of the State, who made a very cursory examination of a few highways, opposed to the testimony of the Chief Engineer of the State Highway Commission, who is in charge of all of the roads of the State and who is responsible for their building and maintenance, plus the testimony of Mr. Older and statements of Moorefield, who built nearly all the present system.

It is apparent that the District Court was greatly influenced by the recommendations of various unofficial bodies to the effect that so-called modern concrete highways can safely bear wheel loads of 8,000 to 9,000 pounds and axle loads of 16,000 to 18,000 pounds. The court paid particular attention to the recommendations of the American Association of State Highway Officials and the National Conference on Street and Highway Safety (Finding of fact No. 25, R. 83). The latter organization developed a proposed Uniform Act Regulating Traffic on Highways (Opinion, R. 70). The proposed act is known as "Act V" (R. 296, 275). The preface to the proposed act and Section 145 thereof appear in R. 275-277. The entire proposed act was designated for printing by appellees' præcipe (R. 296) but only such preface and Section 145 were printed. It will be observed that the proposed act has been published as a government publication by the Bureau of Public Roads of the Department of Agriculture (R. 275); hence we ask the Court to take judicial notice of Section 146 which is printed as Appendix VI, page 159 hereof. And we now therefore particularly direct the Court's attention to the

explanatory note accompanying Section 146 which is as follows:

> "In view of the varying conditions of traffic, and lack of uniformity in highway construction in the several States, no uniform gross weight limitations are here recommended for general adoption throughout the country. For the protection of bridges, the American Association of State Highway Officials recommends the following formula: W equals 700 (L plus 40) where W equals the gross weight in pounds and L equals the length in feet between the centers of the first and last axles of a vehicle or combination of vehicles."

Therefore the District Court was plainly mistaken in its Finding of Fact No. 25 (R. 83) when it stated that a gross load limit of 20,000 pounds is contrary to the recommendation of the National Conference on Street and Highway Safety. Whatever other recommendations they may favor, the bodies proposing the uniform act expressed the opinion that *there should be left to the several States* the question of gross weight limitation because of the varying conditions prevailing in the different States.

Considering now, however, these recommendations as to wheel and axle weight limitations, and suspending for a moment questions that may occur as to the power of theorists in convention to make recommendations that will in effect bind state legislatures, whatever value or effect anyone might hope to obtain from these unofficial recommendations is utterly nullified by the undisputed facts that many "standard concrete pavements" in North Carolina and Illinois, actually built and intended to support without failure these recommended wheel and axle loads, are in fact going to pieces under them (R. 130, 238).

The Illinois situation, where axle weight of 16,000 pounds and gross weight of 40,000 pounds are allowed, but which limits were challenged by interstate motor carriers as un-

reasonable on the very same theories expressed by the lower Court in this case, was described by a Three-Judge Court in *Werner Transp. Co* v. *Hughes,* 19 Fed. Supp. 425, 429:

> "Even under the present legal weight limits, it was necessary for Illinois to spend the sum of $26,715,118.87 between the years 1925 and 1936 in the maintenance, reconstruction and resurfacing of pavement slabs and shoulders upon the paved road system. During the year 1934 the total cost of pavement replacement throughout the state was approximately $191,000. During the year 1935 such replacement cost rose to $248,000. The records for 1936 have not yet been fully compiled but the cost exceeds that of the year 1935. United States route No. 66, between Joliet and Granite City, is a heavily traveled truck route between Chicago and St. Louis. By actual traffic count, the ratio of truck travel on this route, compared with the general average for the state highway system, was 4.5 to 1 during the year 1932 and 4.2 to 1 during the year 1934. The cost of maintenance of route 66 between the years 1925 and 1936, has been the sum of $1,684,363.68 or an average of $763.53 per mile as against an average maintenance cost of $293.20 for the entire highway system of the state. There are highways in Lake County, Ill., which carry heavy truck travel between Chicago and Milwaukee and those that do not. *Both sets of highways are of similar thicknesses, are subject to the same climatic conditions and have the same type of subgrades and similar drainage. In the case of the pavements carrying but little truck travel, the pavements are enjoying comparatively normal lives with low maintenance cost. In the case of the pavements bearing excessive truck travel, they are rapidly disintegrating. Whenever a particular piece of pavement begins to carry heavy truck travel, immediately the life of the pavement begins to go down and the cost of maintenance begins to go up.*" (Italics supplied.)

The record in this case contains eloquent evidence that matters of the character involved in this proceeding are those which not only admit but require diversity of treatment according to the special requirements of local conditions. The National Conference on Street and Highway Safety frankly recognizes that fact. (Appendix VI, page 159). Professor Tucker testified that there is such a difference between local conditions in North Carolina and South Carolina as to possibly explain why North Carolina pavements are suffering more than the pavements in South Carolina (R. 130). Subgrade conditions are of great importance in building highways and such conditions vary in the different states and in different localities in the same State (R. 130, 160, 179, 234). The carrying capacity of pavement obviously depends upon the materials with which, and the specifications according to which, it is constructed. Pavements of various kinds in the respective states are built according to the direction of a multitude of different local and State officials. Even if the millennium of universal uniformity as to design and construction of pavements could be assumed, which is by no means shown to exist, it is obvious that the subgrade, climatic and traffic conditions vary so greatly in the different localities and communities as to positively require diversity of treatment according to the special requirements of local conditions.

Notwithstanding the recommendations of Mr. Moorefield (R. 264) who built most of the South Carolina highways in his 15 years as Chief Highway Engineer (R 158) and whose professional reputation was "most excellent" (R. 134), regardless of the testimony of Mr. Williamson, the present Chief Engineer, regardless of the testimony of Clifford Older, a nationally acknowledged authority and the originator of the first formula for concrete pavement thickness design (R. 126, 129, 237), regardless of the undisputed

evidence that in Illinois and North Carolina pavements are breaking up under what the District Court called "standard wheel and axle loads", the District Court found that the State of South Carolina is unreasonable in prohibiting such loads upon its highways and therefore that the judgment of the South Carolina Legislature in fixing the twenty thousand pounds gross load limitation is unreasonable.

Independently of all of the foregoing, publications of the United States Government of which this Court can take judicial notice contradict and qualify the testimony of appellees' witnesses Teller and Tucker as to the ability of concrete pavements to bear safely wheel loads of 8,000 to 9,000 pounds and axle loads of 16,000 to 18,000 pounds. We refer to the monthly magazine, "Public Roads", published by the Bureau of Public Roads of the United States Department of Agriculture.[2] In the November, 1935 issue, Vol. 16, No. 9, p. 169, is a report written by Mr. Teller himself entitled "Observed Effects of Variations in Temperature and Moisture on the Size, Shape and Stress Resistance of Concrete Pavement Slabs" which sets out therein results of extensive investigations by the Bureau of Public Roads conducted under his supervision of the subject indicated by the title. As a result of these tests and investigations certain important conclusions were reached, one of which is as follows (p. 196):

> "9. For pavement slabs of the size used in this investigation (10 ft. by 20 ft.) or larger, certain of the stresses arising from restrained temperature warping

[2] We refer to this material on the authority of the general principle of judicial notice and the specific instances in which the same and similar matter has been used by this Court. See *Muller* v. *Oregon*, 208 U. S. 412 at 419; *Interstate Transit, Inc.* v. *Lindsey*, 283 U. S. 183 at 190, where Public Roads and other material is cited though not a part of the record; *Morehead* v. *New York*, 298 U. S. 587 at 626-627; *Helvering* v. *Davis*, No. 910 decided May 24, 1937, 81 L. Ed. (adv.) 804 at 809; and *Carmichael* v. *Southern Coal & Coke Co.*, Nos. 724 and 797 decided May 24, 1937, 81 L. Ed. (adv.) 811 at 820-821.

are equal in importance to those produced by the heaviest of legal wheel loads. The longitudinal tensile stress in the bottom of the pavement, caused by restrained temperature warping, frequently amounts to as much as 350 pounds per square inch at certain periods of the year and the corresponding stress in the transverse direction is approximately 125 pounds per square inch. These stresses are additive to those produced by wheel loads."

In the December, 1935, issue of Public Roads, Vol. 16, No. 10, p. 201, the report on these studies is continued and states (p. 219):

"It is apparent, however, that in pavement slabs as they are designed today the factor of safety against breaking must be very small at times when conditions are such as to produce high (temperature) warping stresses. The relatively frequent transverse cracking in our more heavily traveled concrete pavements is also an indication that the combined stresses in them often exceed the flexural strength of the concrete.

"At first thought one might expect immediate cracking when the combined stresses exceeded the strength of the concrete, and this would probably occur if the high stresses extended completely across the slab. When the critical stress is highly localized, as it appears to be under an isloated load, a single application of an excessive stress may produce no immediate effect. In cases where load stresses are responsible either wholly or in part for the cracking of a pavement, it is but natural to expect the transverse cracking to develop gradually and to continue over a period of years.

"Consider, for example, the case of a heavy wheel load moving longitudinally on the pavement at a time when high warping stresses are present in the slab. Being of the same sense in the midsection of the slab, the stresses combine and may exceed the ultimate flexural strength of the concrete. These tests indicate that the high combined stress will be found to exist only for a very short distance directly under each

wheel. The remainder of the cross section will not be over-stressed. It is not probable that such a stress condition would cause a full-length transverse crack immediately, but it is reasonable to believe that a great many repetitions of the condition would cause such a crack."

The above reports lead to this: A concrete pavement slab which is designed to carry an 8,000 pound wheel load under normal conditions will be stressed to the point of failure where such load is applied to the slab when it is in a state of high warping stress produced by temperature. Repetitions of such loads (which are of course inevitable on highways) will cause cracks in the slab, leading to failure, expensive maintenance, and eventual replacement. This indicates the need for great caution before a court should set aside, as arbitrary, the action of a State legislature in fixing weight limitations on the advice of the State engineers. This further indicates the wisdom of Mr. Older's "conservatism" (R. 237-238) in stating that the South Carolina concrete pavements should not be subjected to wheel loads exceeding 4,200 to 6,400 pounds (R. 237). It emphasizes that the various organizations that have advocated permissive wheel loads of 8,000 to 9,000 pounds have, as is usual in such cases, devoted themselves entirely to theory, might have been influenced by selfish interest and certainly overlooked the practical facts.

The 1933 Legislature of South Carolina was not dealing in theory but was at grips with the hard, practical problems of financing and building highways. In fixing the 20,000 pounds gross weight limitation as a means of conserving those highways it followed the recommendation of Mr. Moorefield, who had then been building such highways for thirteen years (R. 264). Mr. Moorefield's integrity and high professional standing have never been challenged. The wisdom of the Legislature is now further attested by the

testimony of Mr. Older and of Mr. Williamson, the present Chief Engineer of the State Highway Commission.

The foregoing analysis conclusively shows that if the ability of the concrete pavements in South Carolina to bear wheel loads of 8,000 to 9,000 pounds is an issue, the appellees failed to sustain the burden of proving it; and that there is a great volume of evidence in sharp conflict with the affirmative evidence on the point and in conflict with the court's conclusion as to the ability of such pavements to sustain wheel loads of 8,000 to 9,000 pounds, which evidence cannot properly be disregarded.

Since the appellees failed to sustain the burden of proving that the aforesaid pavements can safely bear axle loads of 16,000 to 18,000 pounds; since there existed the foregoing conflict in such evidence; since the conclusion of the court with reference to the capacity of such pavement was the basis for its finding and conclusion that the 20,000 pounds weight limitation was unreasonable and hence invalid; and since under established law the court had no power in the face of such conflict in the evidence, to set aside the legislative pronouncement, we therefore submit that the court's decree is erroneous so far as it pertains to the weight limitation assailed and that such decree should be reversed.

b. The evidence of record and evidence and facts of which the court may take judicial notice show a real, direct and practical relationship between the 20,000 pounds weight limitation, as applied to both single units and combinations, and the preservation of concrete pavements in South Carolina, and show such limitation to be proper (Assignments of error Nos. 6, 8, 9, 14, 16, 24).

The court found that there was *no reasonable difference of opinion* as to the gross load limitation of 20,000 pounds,

not being necessary for the protection of the concrete roads and that there was even less justification for the requirement that the tractor-semitrailer combination be counted one unit for the purpose of computing gross load (Findings of Fact 22, 26, R. 83, 84, Opinion R. 73, 75). It is evident from a careful study of the record that in reaching this conclusion the court misunderstood much of the evidence which was plainly before it. Appellees proceeded upon the theory, and the court concluded, that only wheel load or axle load are critical factors in pavement strength (Finding of Fact 22, R. 83). They failed to explain the difference between theoretical factors of *design* and practical factors of *limitation*. At no point in the record did the court have the benefit of a plain, simple translation of wheel load into axle load and then into gross load, yet the relationship is clear and was apparently so obvious to the expert witnesses in the case that no simple explanation was made.

The witness Teller testified (R. 135) in regard to the ratio of axle load to gross load of trucks that "we have weighed a good many of them", meaning the U. S. Bureau of Public Roads, that in general "there is from sixty-five to eighty per cent of the load on the rear end", referring to conventional trucks of two axles, and that according to the most recent data with which he was familiar, and the trucks they had been using in their tests, there was about one-third on the front end and about two-thirds on the rear end when a capacity load was on.

Interesting data upon this subject appear in the United States Government publication, "Public Roads" above referred to. In the May, 1935, issue, Vol. 16, No. 3, appears an article entitled "A Study of The Weights and Dimensions of Trucks". It describes a study made jointly by the U. S. Bureau of Public Roads, certain officials and departments of the State of Maryland, and the Johns Hopkins Uni-

versity, to determine, among other things, how the gross loads of motor vehicles are commonly distributed to the various axles. Data was obtained by weighing trucks at two-week intervals from the middle of June to the middle of November in 1934 at roadside "clinics" on two U. S. routes out of Baltimore which presumably carried the interstate traffic referred to generally in this case. At page 42 appears the following:

> "• • • in the case of single vehicles, the weight carried on the rear axle averages approximately three-fourths of the gross load. Vehicles having gross loads less than 10,000 pounds carried an average of only 68 per cent on the rear axle. The gross weight groups above 10,000 pounds all had an average of close to 75 per cent for weight on the rear axle. Included among these vehicles were many partially loaded trucks, and the low average percentage of load on the rear axle is doubtless due to greater proportionate effect of the engine and the tendency to carry partial loading in the forward part of the truck body. • • • In the case of tractor-semitrailer combinations, it may be seen that about 45 per cent of the entire gross weight of the combination is carried on the rear ends of both tractor and semitrailer, leaving about 10 per cent for the front wheels of the tractor."

It is therefore obvious that, when practical facts about automotive engineering are taken into consideration, a 20,000 pound gross load limitation when translated into axle-loads means that for the standard, two-axle trucks in use there is an *automatic* limitation for the heavier axle of from 13,333 pounds to 15,000 pounds. Since an axle is supported by a wheel or dual wheel assembly at each end a 13,333 pound *axle* limit in practical fact results, when the axle is level, in a *wheel* load limit of 6,666 pounds and a 15,000 pound *axle* limit in a 7,500 pound *wheel* limit. In this connection it is significant that the witness Older

testified (R. 237, 238) that the maximum axle limit which should be permitted on the best concrete pavement in the State is 12,500 pounds, and the witness Williamson (R. 187) that, for protection of all the concrete pavement in the State, an axle load limit of not to exceed 13,000 pounds should be maintained. From this very simple analysis it may be seen that there is a direct and real relationship between the 20,000 pound gross load limit and the protection of the concrete pavement so far as two-axle trucks are concerned. If inaccuracy exists the limit is too liberal, but the legislative judgment might properly have been influenced by other considerations such as the number of such heavy units which might operate, the tax revenue they might produce or even the economic arguments urged by appellees.

However, it is urged by appellees that if axles are spaced forty inches or more apart that neither axle contributes to the stress in the slab which is set up by the other. They then argue that, such being the case, axles may be multiplied indefinitely provided no single axle is overloaded and the 40-inch spacing is maintained and no greater damage will occur to the pavement than through the operation of an ordinary two-axle truck. Although appellees abstract statement to that effect, when understood in the light of practical circumstances, means something entirely different, as we explain in our subdivision (d) of this point, even if such allegation were correct there is an absolute justification for the 20,000 pounds gross weight limitation. As is well known the ordinary type vehicle which makes use of more than two axles is the tractor-semitrailer combination. This consists of a motor unit, called a tractor, with motor and cab, supporting, over its rear axle, the forward portion of a semitrailer, which semitrailer is supported at its rear end by a third axle.

The gross load distribution which occurs over the three axles of a tractor-semitrailer combination in practical operation is described in the above mentioned article in "Public Roads" Vol. 16, No. 3. It shows that about 90 per cent of the entire gross weight of the combination rests on the rear axle of the tractor and the rear axle of the semitrailer, that is, about 45 per cent on each of the last two of the three axles, leaving about 10 per cent for the front axle. It also explains that for single vehicles only about 68 per cent of the gross weight is carried on the rear axles of trucks having a gross weight of not over 10,000 pounds, as against an average of 75 per cent for all trucks, showing that for lighter units it is possible to place a greater percentage of the gross load, in fact as much as 3,200 pounds, on the front axle without impairing steering and "maneuverability". It is reasonable to assume that such is the case with the lighter tractor-semitrailer combinations.

It may thus be seen that a gross weight limitation of 20,000 pounds, as applied to such combinations, when considered in the light of practical experience and, recognizing the manner in which trucks are commonly designed and loaded, automatically and by its own terms, means that the second and third axles shall not exceed from 8,500 to 9,000 pounds, since the front axle will carry from 2,000 to 3,000 pounds.

It may then be urged that such a limit is unreasonable and not necessary for the protection of the pavement. But let us scrutinize the evidence from that standpoint.

The witness Williamson testified (R. 178) that about 60 per cent of the concrete pavement has been built without any center joint. This is not controverted. There are 1,800 to 2,000 miles of concrete pavement (R. 160) which means that there are from 1,080 to 1,200 miles of such pave-

ment without such joint. We assume the witness referred to concrete as distinguished from bituminous concrete. If bituminous concrete is included, the point here urged is stronger. Williamson also testified that all pavement built since 1929 or 1930 had been built *with* center joint, so that the 720 to 800 miles of concrete with such joint was all built since that date. The Act in question was passed in 1933, and, although there is no showing as to the pavement built each year, it is fair to assume that considerably in excess of 60 per cent of the concrete pavement then in existence was without such joint.

At this point the testimony of the witness Older is particularly illuminating (R. 237). He testified, in substance, as follows:

> A pavement may or may not have a longitudinal joint running down the center of the road. Williamson's testimony indicated that part of this pavement did not have longitudinal joints. The concrete pavement having no longitudinal joint having a thickness of six and one-half inches at the center and seven and one-half inches at the edges are the weakest pavements of the lot. It is a matter of common observation that if there is not a center longitudinal joint built into the pavement, nature will put a longitudinal crack in it. Now, when this crack comes it will separate a certain amount due to contraction during low temperature periods. Then at the interior portion of the pavement we have an edge that is only six and one-half inches thick that is exposed to the wheels of traffic. The outer edge has been strengthened to perhaps carry a heavier load, but here is an inner edge that is a weak link in those pavements. For those pavements I would be forced to give an opinion of a load that is quite low. In my judgment, those pavements are not capable of supporting indefinitely wheel loads in excess of about 4000 or 4200 pounds.

There is no specific testimony in the record to controvert Older's statement as to the capacity of concrete pavement without center joint. The only testimony which might be claimed to conflict is that of Mr. Tucker (R. 126) that the pavement over which he traveled was in good condition and would bear axle loads of 16,000 to 18,000 pounds, and there is no showing as to whether or not such pavement was built with center joint; that by Mr. Teller which was general in character (R. 133) and to the effect that concrete of the thickness of that prevailing in South Carolina would bear 16,000 to 18,000 pound loads with no discussion of the presence or absence of center joint; and the admission by Mr. Williamson (R. 179) that the new roads built on main highways will support axle loads of 18,000 pounds under good conditions. His admission is later qualified, as will be hereafter explained, but it must be admitted that roads built prior to 1930 are not "new roads" and that he could not have been referring then to the pavements without center joint.

As Mr. Older testified that the wheel load on some 60 per cent of the concrete roads, that is, those without center joint, should be limited to 4000 to 4200 pounds, an understanding of such testimony means an axle load of 8000 to 8400 pounds which, when explained as above, means a gross load for a tractor-semitrailer of just a little less than 20,000 pounds which is provided in the statute.

As we previously observed, the Act was passed on the advice of the then State Highway Engineer, Mr. Charles H. Moorefield. He was undoubtedly aware of the condition of the roads and how they had been constructed. He must have known of the large mileage of concrete in existence in 1933 which was without center joint. He must have known of the need of such joint because he had then been building pavements with such joint for a period of about

four years. It is reasonable to assume that he calculated the capacity of such pavement in the same manner as did Mr. Older and that he was aware of the manner in which truck and trailer loads were commonly distributed, and advised such a limitation as a very practical measure to protect the bridges, the weak concrete pavement without center joint, the bituminous pavement and low type surfacing, the city streets and the highways of the State generally, yet to permit such volume of traffic as would move in conventional two-axle trucks to maintain a rear axle load as nearly consistent with the limits in other States as practical local considerations would permit.

From that which is set forth above, it is readily obvious that the Court either misunderstood or disregarded the testimony which was before it in reaching the conclusion that there was "no reasonable difference" of opinion as to the absence of any relationship between the gross load limit and the protection of the roads, and in the observation that there was "even less justification for the requirement that the tractor-semitrailer combination be counted as one unit for that purpose". A legislative enactment need not be scientifically accurate nor mathematically exact. The Legislature was entitled to make the common sense observation that single trucks commonly operate on two axles, front and rear, that the greater portion of the load is commonly balanced over the rear axle, that from two-thirds to four-fifths of the load is commonly carried on such rear axle, that tractor-semitrailer combinations commonly operate on three axles and that the rear axle of a semi-trailer is commonly loaded in about the same manner as the rear axle of its tractor. The Legislature need not spell out the basis of its pronouncements in order to preserve their validity. If the legislative result does substantial justice the manner in which and the basis upon which it achieved that result is immaterial. Highway construction

is not an exact science. Factors for *design* of pavements may or may not be fair or practical factors for their *protection*. The evidence of record and the very nature of the gross weight limitation furnish ample basis for both the conclusion that it is a fair, a necessary and a reasonable measure for highway protection and that there is ample room for, and that there does in fact exist, an actual difference of honest opinion as to its fairness, necessity and reasonableness.

c. The facility of compliance with a gross load limitation justifies it as a valid measure, preferable to a wheel load limit, since it bears a practical relationship to the protection of the pavement. (Assignments of Error Nos. 8, 9, 14, 16, 24.)

As has been pointed out above there does exist a very practical relationship between the gross load limit here considered and the protection of the South Carolina roads. While we contend that the comparative merits of two valid limitations are not questions for the Court to decide and must be left to the exclusive discretion of the Legislature, we further urge that the facility of compliance with a statute as well as the multiple purpose or purposes for which it is enacted must be taken into consideration in determining its reasonableness. Here the Court finds that a gross weight limitation is reasonable with respect to bridges, although it does find that a 20,000 pounds gross weight limit is unreasonable as applied to "modern bridges" (Finding of Fact 25). When the Legislature passed the Act in question it must be borne in mind that it had many problems to consider. It must protect not only the "modern" concrete roads but also the old ones, with or without center joint, the bituminous roads, those covered with low type surfacing, the local roads, the city streets and the bridges, both old and modern. If the Legislature could lay

down a plain simple limitation which was the *result* of the consideration of the capacity of all of these elements its simplicity and the facility with which it might be complied with, as well as efficiency in enforcement, are all elements for legislative consideration and bear upon the reasonableness of the Act.

It must be conceded that a truck operator knows or can easily ascertain the unladen weight of his equipment. With a flat, gross weight limit it is a simple matter to subtract such unladen weight from the limit permitted to determine the amount he may legally haul. Clearly the weight of the cargo must be determined under any kind of a limitation and, with a gross weight limit applicable to all, a truck operator can readily comply with the law.

If the limit is based on wheel weight how can an operator know that his load will not shift after it is loaded, that the wheels on opposite ends of an axle will remain level and thus evenly divide the axle weight, or that in the case of fluid cargo, such as gasoline and the like, the load may not flow to different axles on the up or down grades?

Contrast the simplicity or practicability of the limit here questioned with that which is urged by appellees, W equals 700 (L plus 40), explained as it may be, then visualize the mathematical gymnastics which must be performed by the average truck operator or the average law enforcement officer to determine whether or not he is violating the law, and the good sense of the legislative judgment is immediately apparent.

d. An absolute and independent justification of the South Carolina gross load limitation exists in the varying subgrade conditions found (Assignments of Error Nos. 8, 9, 14, 15, 24).

Professor Tucker testified:

> "It is almost impossible to say what causes a failure of a pavement, especially a concrete pavement, there are so many factors entering into it" (R. 125).

Pavement failure is due to a number of causes including trucks, subgrade conditions and frost (R. 125, 130). Concrete roads constructed in as nearly the same manner as possible will vary in strength in different places. The strength of subgrade and foundation varies in different parts of the State and even in the same territory approximately. Sometimes it varies in very short intervals along the same piece of road (R. 235).

All of the witnesses agreed that subgrade conditions are one of the principal causes of pavement failure. Inasmuch as the record contains very little evidence as to the reasons for the importance of subgrade, what faulty subgrade conditions are, and what effects they cause, we at this time resort to information of which this Court can take judicial notice contained in the aforesaid magazine "Public Roads". No. 3, Volume 10, page 37, May, 1929, contains an article "Interrelationship of Load, Road and Subgrade". The importance of subgrade is shown by the following on page 41 of such article:

> "'Breakage' due to load occurs on account of low subgrade support. This was clearly brought out in surveys by the highway research board and experiments performed at Arlington. According to the Arlington test data summarized in Table 2, the ultimate resistance of slabs (7 feet square) to the occurrence of breaking differs considerably depending upon whether they are laid on a drained or an undrained subgrade."

Table 2.—Average load capacities of nonreinforced concrete slabs 7 feet square, when laid on clay subgrades drained and undrained. (Impacts applied at corner and edges of slabs, Arlington tests.)

Slab thickness, inches	Mix	Breaking loads [1]	
		Wet subgrade	Drained subgrade
		Pounds	Pounds
4	1:1½:3	([2])	13,650
6	1:1½:3	12,825	[3] 20,000
[4] 6	1:1½:3	10,675	22,225
8	1:1½:3	25,900	42,040
[4] 8	1:1½:3	25,475	38,800
[4] 6	1:3:6	([5])	18,430
6	1:3:6	9,580	[3] 18,300

[1] Unless otherwise noted each value is the average of two tests, one with the load applied at the edge and the other with the load applied at the corner of the slab.

[2] Broke under static load varying between 2,000 and 8,000 pounds.

[3] One edge test.

[4] Covered with bituminous tops.

[5] Six out of eight slabs tested broke under static loads varying between 2,000 and 8,000 pounds, the other two tests, both for edge loading, averaged 10,105 pounds."

The complexity of the problem is shown by the following from page 45:

> "Thus, according to the preceding discussions, pavement behavior may depend upon the character of the subgrade soil material (raw constituents), upon the structure of the soil in its natural state (dense or loose, homogeneous or full of cracks or root holes), upon the soil profile (variation in depth of the different soil zones and the relative occurence of permeable and impermeable strata) upon adjacent topography (through its influence upon the occurrence of surface and un-

derground water), upon climatic conditions (well distributed or intermittent occurrence of rainfall and presence or absence of frost action), or upon any combination of these variables."

A discussion of some of the soils of South Carolina appears at page 48:

"GROUP A-5, SOILS CHARACTERIZED BY POROSITY, DEFORMATION, AND REBOUND.

Similar to those of Group A-4, these subgrades also consist primarily of very fine sands or silts. But in addition, they contain an appreciable percentage of micaceous particles or diatoms, which cause the subgrades of this group to be highly porous, to deform quickly under load and to rebound appreciably upon removal of load." * * *

"The highly micaceous soils occur very frequently in Pennsylvania, Maryland, and North and South Carolina and other states."

A further description of subsoils encountered in South Carolina is contained in Volume 17, No. 11, page 249, January, 1937, of "Public Roads". This article is entitled "Experimental Bituminous Treatment of Sandy Soil Roads" and has to do entirely with South Carolina. With reference to certain South Carolina soils it is stated on page 249:

"A wide variety of bituminous materials and aggregates have been used successfully for such work, and while different types of surfaces have resulted, there has been no special difficulty in providing a satisfactory surface for roads whose bases and subgrades were capable of supporting traffic.

"For those localities where the roads were composed of loosely bound soil, such as sand or mixtures of sand, silt, and clay that were inherently weak, the problem of improvement was more difficult. Such a condition is found in the South Atlantic coastal area in general, and the eastern part of South Carolina in particular.

"An appreciable mileage of the roads in this territory traverses relatively low, swampy areas that offer little opportunity for adequate drainage of the right-of-way because the ground-water level in many places is approximately at the elevation of the ground surface."

And on page 260:

"The most important factor contributing to roughness during most of the life of the road has been the sub-grade, which is extremely variable in composition and, in some locations, is very poorly drained. Settlement occurred in some areas that had appeared stable prior to constructing the bituminous mats. Investigation disclosed that the subgrade in such areas was extremely wet and plastic while material less than a foot outside of the bituminous mat was firm and relatively dry. The mat apparently prevented surface evaporation and permitted the subgrade to acquire and retain sufficient moisture to destroy its stability. Obviously, the composition could not be changed after construction but considerable effort has been expended to provide artificial drainage. The ground-water level in many cases is so high that the maximum benefit derived by the construction of side ditches is to provide a relatively shallow depth on drained base which, because of its composition, is variable in load supporting capacity."

And on page 261:

"As in the case of experiment 1, subgrade and drainage conditions in this experimental section were exceedingly variable. Each section had sandy areas, areas high in clay content, poorly drained areas, and areas fairly well drained."

A further discussion of subgrade, entitled "The Soil Profile and the Subgrade Survey", appears in the September, 1931, issue of Public Roads, Vol. 12, No. 7, p. 181. At pp. 183-184 the following appears:

"The characteristics of a soil and its value as a subgrade under different conditions are directly reflected in the condition of the road surface. Rigid pavements are affected by inequalities of subgrade support. Nonrigid pavements are chiefly affected by low road supporting power. Studies have shown that the subgrade soil exerts important influence upon the distance between transverse cracks in concrete roads, and that excessive longitudinal cracking develops on definite layers of certain soil types. Other soil characteristics, such as swelling, affinity for water, rebound, etc., are detrimental to concrete before it sets as it is then flexible pavement."

Faulty subgrade conditions not only result in breaking of the pavement slabs on the application of truck loads, but also cause a sinking away of the subgrade underneath the pavement, resulting in a subsiding of the pavement. To fill in subgrade that has subsided, or to strengthen such subgrade, and thereby bring the pavement back to grade, resort is had to the operation known as "mud jacking". Some explanation is given of this in Volume 14, No. 10, page 188, December, 1933, issue of Public Roads, entitled "Laboratory Tests Assist in the Selection of Materials Suitable for Use in Mud Jacking Operations". To carry on this operation a hole is bored through the pavement and a suitable material is pumped through this hole. The following quotations show the nature of the operation as fully as shown in the article:

"A satisfactory mixture of soil, portland cement, and water for use in raising settled areas of road surfaces by mud jacking (see fig. 1) must be of such a character that it can be readily forced through the mud jack. It must possess qualities which will enable it to spread freely over the subgrade as the separation between the road surface and subgrade increases during the pumping operation, and it must prevent appreciа-

ble settlement of the raised area of pavement after the pumping operation. • • •

"In passing through the pump and hose the mixture is confined to a definite channel of comparatively large size and only the proper combination of pump pressure and fluidity of mixture are required. When the paste reaches the subgrade, however, its flow is not restricted to any particular cross section. It is free to form in layers whose ratios of thickness to area of distribution depend to a very considerable extent on the frictional resistance of the subgrade and the under face of the road slab which bound the shallow openings penetrated by the paste. • • •

"Raised areas of pavement may settle after the pumping ceases as a result of several causes. The weight of the pavement may cause the viscous paste to flow out as soon as the pump stops or the paste may shrink on loss of moisture. The paste or soil mixture must be stable enough to support the pavement and loads produced by traffic immediately after pumping ceases and must resist shrinking upon loss of moisture."

The subjects of subgrade and mud jacking are discussed in *Werner Transportation Co.* v. *Hughes* (D. C. N. D. Ill.) 19 Fed. Supp. 425 at 428, 429, as follows:

"Because of the presence of varied types of soil in Illinois, there is a variance in the supporting power of the subgrade during the seasons of the year. In the case of embankment materials, it is difficult to place them in a state of compaction which is uniform in its supporting power and will prevent settlement of the pavement slab. When the frost leaves the ground, many soils have little supporting power and many change greatly in volume with the addition of a relatively small amount of precipitation. During the periods of freezing weather many soils expand greatly, due to presence of water, and lift the pavement from the subgrade, introducing roughness into the surface,

resulting in impact stresses under heavy loads, producing pavement destruction. Daily changes in temperature cause the pavement slab to warp, or curl, thus leaving that particular portion of the slab without subgrade support, so that when a vehicle passes across such portion of a slab, the slab must act as a beam to carry the load back to the point where there is support. * * *

"Subgrade conditions are frequently unstable on fills back of bridge abutments and at other locations. Depressions in the subgrade are usually caused by the action of moisture upon unstable soil and a variety of other causes. *Where a weakened subgrade condition exists the pavement slab performs to some extent the functions of a bridge, in which case the total or gross weight imposed upon the slab determines the stress induced upon the material constituting the slab.* (Italics supplied.) If the stress produced by such total weight is in excess of the ultimate strength of the material, rupture will occur and the slab will settle into the affected area. Because of the settlement of slabs, it is necessary to raise them by what is called a mud pumping outfit. Since the year 1931, there has been in Illinois a total of 12,050 depressions so raised, covering a total area of 1,082,775 square yards. However, in numerous locations where such settlements have occurred, the pavements have been so badly broken that they had to be entirely rebuilt."

The relation of all of the foregoing to the subject of the validity of a gross load limitation is plain. It is stated in the above quotation from the Werner Transportation Co. case, "When a weakened subgrade condition exists the pavement slab performs the function of a bridge." This may be reasonably deduced from the evidence in the record. The slab spreads the weight of the vehicle over the subgrade (R. 136). It is the subgrade which supports the load. It is the function of the surfacing merely to act as a roof over the

subgrade and to spread the load over such subgrade (R. 160). Where the subgrade is weak, where the material has become soft and has absorbed water under the slab, or where there has been actual falling away or shrinkage of the subgrade under the slab, it is obvious that the supporting power of the slab must be extended over a much wider area than under good subgrade conditions. The extent of this area appears from the above excerpt from the Werner Transportation Co. case. 12,050 depressions were raised, covering a total area of 1,082,775 square yards. Assuming a pavement width of 18 feet, it will be seen that the average length of such depressions was about 45 feet. At some time during the development of the weak place in the subgrade, perhaps before the pavement has commenced to sink, the subgrade was sufficiently weak under an area of the average length of 45 feet so that the slab over that weakened area performed the functions of a bridge over that area. Thus the gross weight of the vehicle imposed upon the slab over such area becomes the critical factor in the strain imposed upon the slab. That this is a serious condition quantitatively is evidenced by the 12,050 depressions found in Illinois in less than six years.

The District Court found (Finding of Fact 25) (R. 83) that gross weight is of importance in connection with the use of bridges. It is a well known scientific fact, of which the Court may take judicial notice, that when a beam is supported at each of its ends without support between them, both the *aggregate* load and the proportionate distance from the respective ends at which such load or loads is applied are critical factors in determining the amount of weight such beam will bear before it breaks. From all of the above it may be seen that the rigid concrete pavements in South Carolina form not only a ribbon of smooth traveling surface over the natural ground but also a series of virtual bridges covering the numerous places in the subgrade of varying

size where the supporting power of such subgrade, because of conditions described above, has been lessened or has vanished. The foregoing discussion explains the statement of the witness Williamson to the effect that "some concrete pavement in one section may hold up 100,000 pounds. The same identical pavement, as far as construction goes, may break up under a two or three thousand pound load" (R. 160).

It takes no scientific research to understand these plain, simple principles. As the Court well knows the discourse of scientists often tends to obscure rather than explain the ordinary scientific facts known to the average man. There was probably not in existence any better knowledge of the soil, subgrade, and climatic conditions in South Carolina than the collective knowledge of the Legislature. The members of the Legislature, not pretending to be scientists, were probably well aware of the principles here discussed. That there exists ample justification for the 20,000 pounds *gross load* limitation *as a means of protecting concrete pavement*, regardless of the number of axles supporting it, seems absolutely clear. In the face of these well known principles no group of engineers, and much less the Court, can say that the Legislature was wrong in fixing its gross load limit, that its action in so doing was clearly arbitrary or capricious and that there exists no debatable question as to the necessity for or reasonableness of such limitation.

e. The provision in Section 2 that a tractor-semitrailer combination shall be considered as one vehicle for the purpose of the 20,000 pounds gross weight limitation, is valid (Assignments of Error No. 6, 24).

The District Court found (Finding of Fact No. 6, R. 77) that the provisions of Section 2 providing that a tractor semitrailer combination shall be considered as one unit for the purpose of the twenty thousand pounds weight limita-

tion is unreasonable. It made these findings in connection with its findings that the twenty thousand pounds gross weight limitation as to one vehicle is unreasonable.

The gross weight limitation being valid, as explained above, it is plain that these provisions of Section 2 are not only valid but necessary in order to effectuate the twenty thousand pounds gross weight limitation. The same reasons which make the gross weight limitation valid as to an ordinary truck apply to a tractor semitrailer combination because the latter has precisely the same effect, as far as gross weight is concerned, as the ordinary truck, and presents the same gross weight problem.

Thus the Court erred in its Findings of Fact Nos. 20, and 26 (R. 82, 84) and in paragraph one of its decree in enjoining enforcement of that part of the law providing that a tractor semi-trailer combination shall be considered as a single unit for the purpose of determining weight.

The finding expressed in Finding No. 20 that the effect of a tractor semi-trailer combination is not different from the effect produced by two vehicles of equal weight, one following the other, is per se fallacious. It is obvious that the intent of this provision is to prevent more than twenty thousand pounds gross weight being imposed upon highways and bridges within a limit of 35 feet, this being the maximum length permitted such combination. Section 7, Act. 259, (Appendix I, p. 148). Common experience proves that two twenty thousand pound vehicles will not follow each other within that distance. The law of South Carolina prohibits heavily loaded vehicles following each other closer than 150 feet.

Acts of South Carolina of 1937, Act 175, Section 12, page 227, provides as follows:

> "b.-The driver of any motor truck or motor truck drawing another vehicle when driven upon a roadway outside of business or residence district, shall not follow within 150 feet of another motor truck or motor truck

drawing another vehicle, and the driver of any motor truck traveling in convoy of two or more such motor trucks shall not follow within 500 feet of any other motor truck in said convoy."

f. The Width Limitation of ninety inches is valid (Assignments of Error Nos. 10, 11, 24).

The District Court found (Findings of Fact Nos. 24 and 26, R. 83, 84) that the width limitation of ninety inches is unreasonable; and in its decree the Court enjoined the enforcement of this width limitation provided the vehicles taking advantage of such injunctive protection do not exceed ninety-six inches in width.

In effect the Court holds the width limitation invalid on the highways covered by its decree, but writes a new act limiting the width under any circumstances to ninety-six inches. The legislative character of such action will be discussed in our point IV. However, we submit that there is not one scintilla of *competent* evidence to support the Court's finding in this respect, that the proper evidence forces an opposite conclusion, that the limitation shows on its face that it is of such character as to be free from judicial interference, and that the Court by its own findings and the terms of its own order convicts itself of its own error.

The only testimony submitted by appellees bearing on the effect of the width limitation was wholly irrelevant for the purpose of showing such limitation unreasonable. They offered much as to inconvenience and added expense to shippers and those engaged in performing interstate transportation service by truck, as to the width limitations which prevail in other States and the percentage of some classes of trucks which are ninety-six inches wide. We submit that under established law, all of such testimony was irrelevant as proof of unreasonableness in the sense in which it is here involved. *Morris* v. *Duby, supra,* 274 U. S. 135, *Sproles* v.

Binford, supra, 286 U. S. 374, and *N. Y., N. H. & H. R. Co.* v. *New York, supra,* 165 U. S. 628, are all authority for the proposition that in the absence of Federal legislation specifically covering the subject and in view of the fact that the regulations covering the subject are within the power of the State, inconveniences to interstate commerce and those engaged in it are immaterial. We submit that under the authority of the same cases last above mentioned the width limitation shows on its face that it is such as to be within the exclusive realm of legislative authority. In addition to this consideration there is ample evidence in the record to support the legislative conclusion. Appellants showed that there are many narrow bridges in the State (R. 187), that there are several 18 feet wide and one fifteen feet wide, that wider vehicles increase traffic on the unpaved shoulders which in turn increases maintenance cost (R. 198, 236), that there are over one hundred miles of pavement in the State system only sixteen feet wide, that most of it is eighteen feet wide, that there is some twenty feet wide and that there is one little stretch in Sumter County only nine feet wide (R. 177, 197), that wide vehicles compel more travel on the edges of the road where traffic is more destructive except in the case of concrete which has been thickened at the edges (R. 236) and that it is easier for the driver of an approaching vehicle to see beyond a vehicle which it is overtaking if the preceding vehicle is narrower, that the angle of vision is cut off in proportion to the width of the vehicle ahead and that "six inches difference (in the width of a truck) would make a great difference" (R. 242).

All this testimony is clearly proper and relevant to show that a width limitation is in fact a measure to promote safety in highway traffic, to preserve the highways and bridges and to support the reasonableness of the legislative judgment. The mere fact that laws of other States may

provide otherwise is wholly immaterial. In *Sproles* v. *Binford, supra* (286 U. S. 374), the Court said:

> " * * * one state can not establish standards which would derogate from the equal power of other states to make regulations of their own."

There are so many obvious circumstances which would affect the reasonableness of a width limitation that comparison with other States is not even persuasive. Such differences include not only difference in pavement widths, but also width of right-of-way, differences in highway alignment and curvature, in grades and even differences in density and kinds of traffic.

The final consideration which should nullify the decree in this respect is the Court's own action. By the limiting of the protection of the injunction to vehicles of such widths as do not exceed ninety-six inches, the Court, by its own action, admits the propriety of and necessity for a width limitation. *It merely disagrees with the judgment of the Legislature and substitutes its own judgment therefor. For a difference of six inches in width limits it presumes to invade the exclusive realm of legislative discretion.* In *Sproles* v. *Binford, (supra)* 286 U. S. 374, at page 388, the Court said:

> "Limitations of size and weight are manifestly subjects within the broad range of legislative discretion. To make scientific precision a criterion of constitutional power would be to subject the State to an intolerable supervision hostile to the basic principles of our Government and wholly beyond the protection which the general clause of the 14th Amendment was intended to secure."

In its Finding of Fact No. 24, the Court assigned three reasons for its conclusion that the width limit is unreasonable, (1) that all other States permit ninety-six inches, (2) that ninety-six inches is the standard width of trucks engaged in interstate commerce and (3) that enforcement of

the limitation would exclude "a large portion of the equipment" used in interstate commerce without material advantage to the safety or preservation of the highways. We submit that the width of the paved or travelled surface of the highways is the basic, physical reason for the existence of a width limit on vehicles which use them. That a width limit of ninety inches is *per se* reasonable for vehicles travelling on the 100 miles of roads in the State system which are not more than sixteen feet wide is a matter that admits of no argument. Where those 100 miles are situated is not shown nor whether or not they are so placed as to be "important" and their relative importance are manifestly questions for the Legislature. The relative necessity for a ninety inch as against a ninety-six inch limit on pavements eighteen feet and twenty feet wide is clearly a question for the Legislature. Since whether or not the enforcement of the width limitation would result in material advantage to the safety or the preservation of the highways is a question for legislative determination, and since the width limits in other States, the standard width of trucks engaged in interstate commerce, and the exclusion of a large portion of the equipment used in interstate commerce, are all considerations which are immaterial and can not operate to inhibit the State's fundamental power, the finding by the Court that the width limit of ninety inches is unreasonable was plainly erroneous and should be reversed.

2. *The decree was based upon the premise that there is a well connected system of concrete roads in South Carolina and the record does not show that such well connected system exists.* (Assignments of Error Nos. 4, 5, 24).

The theory of the appellees' case and upon which the lower Court entered the decree rests upon Finding of Fact No. 18 (R. 81):

"That the said standard paved roads form a well connected system of highways which have been improved with federal funds as a part of a national system; * * * that they are capable of carrying the commerce which has been developed by modern truck transportation; that federal highways numbered 1, 15-A, 17, 21, 25, 29 and 52 comprise the great arteries of interstate commerce through the State of South Carolina, are of standard concrete paving, as above described, with the exception of a few short stretches, a few miles in length which are not of sufficient importance to justify the denial of the use of these arteries of commerce for the purpose for which they were constructed."

It is the position of the appellants that even if such system did exist and that even if the roads in such system could withstand all of the loads described by the lower Court, the statute is nevertheless reasonable because of its necessity for the protection of all the other 57,000 miles of highway in the State and because of the valid application of the law to all of the roads as an entity, which position will be fully explained at our subdivision 3 of this point. However, it is clear that appellees' case and the Court's findings and decree rest upon the premise that the roads enumerated above form a well connected system of concrete roads in the State, that interstate commerce by truck is carried on over such system, and that the statute is unreasonable because it interferes with part of the *truck* traffic over such system. If this premise fails then appellees' case and the findings and decree fail.

Without in any way admitting that the Court's reasoning is correct (for we contend to the contrary), we nevertheless submit that the said 18th Finding is erroneous because entirely unsupported by the record and that the record in fact shows the converse. The burden of proof to show the unreasonableness of the South Carolina laws rested

upon the appellees. If the issue of whether there is such a system of well connected highways is material, appellees had to show its existence to make their case. *Keokee Consolidated Coke Co.* v. *Taylor*, 234 U. S. 224; *Williams* v. *Baltimore*, 289 U. S. 36; *Lindsley* v. *Natural Carbonic Gas Co.*, 220 U. S. 61; *Interstate Busses Corp.* v. *Blodgett*, 276 U. S. 245; *Pullman Co.* v. *Knott*, 235 U. S. 23.

This they did not do, and the evidence shows the contrary. The following is all of the evidence on this point:

Harry Tucker, Professor of Highway Engineering at the North Carolina State College and Director of the North Carolina Experimental Station at Raleigh, testified for appellees (R. 124). Everything he had to say as to the strength of highways related to plain concrete roads. His actual examination of South Carolina roads was confined to those covered in a trip taken by him and described at R. 126. The roads apparently covered by him, acccording to his testimony, are shown on Appendix VII on page 161 of this brief. He did not testify that the roads over which he traveled are entirely of concrete, and the fact is that there are numerous stretches of low type road interspersed with the concrete portions. This is evident from an examination of the appellees' Exhibit No. 6 (R. 300) and will be more fully shown later herein. Nowhere in the testimony of this witness is there any evidence even attempting to show a well connected system of concrete roads, or in fact of just what type of roads the highway system consists.

Intervener, Interstate Commerce Commission, intervening as a party plaintiff (R. 42, 50) produced as a witness on its behalf L. W. Teller (R. 130). There was no attempt made to show by Mr. Teller's testimony the existence or extent of a system of concrete roads in the state. His testimony material at this point is the following:

> "I do not know what portion of the roads of this state are concrete roads. I do know that some of the

roads within the State Highway System are what they call bituminous surfacing, because I saw some of them Sunday. So far as I know the weight that can be permitted on pavement of the bituminous type cannot be determined analytically or by tests. I do not know as to what weight should be permitted on them. I do not know as to the dirt type of roads within the State Highway System or anything about their designing or what weights they could properly bear; and, of course, I do not know anything about the mileage of these roads. I am not acquainted with the design of the bridges throughout the State Highway System of South Carolina.

(Asked to give his opinion as to what load the roads in South Carolina should bear, speaking of all the roads in the State Highway System:)

"I don't believe that there is anyone that could go over the roads of any State Highway System and say that this road is good for so much, and this road is good for so much and the other road is good for so much. The concrete pavement is the only pavement that we have a means for rational design. The design of the other types must be based on the observation of pavements of that type, under the conditions in which they have to serve under the traffic they are bearing, in my opinion" (R. 134).

"Well, we are talking about interurban roads, and interurban roads are not to any extent at all, so far as I know, built of anything but straight concrete pavement, where the rigid type is concerned. We find a few short sections of concrete bases with brick tops in some states. We find a few short sections of concrete bases, with bituminous top in some states, but by and large the rigid pavement as concerning interurban traffic is the concrete pavement" (R. 136).

The foregoing testimony of witnesses Harry Tucker and L. W. Teller plus appellees' Exhibit No. 6 (R. 300) constitute all of appellees' evidence on the issue as to the existence of a well connected system of concrete roads in

South Carolina. Obviously, the testimony of the two witnesses affords no light on the subject, and Exhibit 6, upon examination as we shall hereinafter show, definitely establishes the nonexistence of such a system.

For the appellants, J. S. Williamson, Chief Engineer of the South Carolina Highway Commission in effect testified: There are 60,000 miles of road in the state and about 6,100 in the State Highway System. The other road mileage is under the supervision of county and city authorities. There are in the state system 2,417 miles of standard pavement, 1,724 miles of bituminous surface, 1,141 miles of earth type and 666 miles of unimproved. Of this 2,417 miles of standard type of pavement, there are 1,800 to 2,000 miles of pavement entirely of concrete, and the rest includes asphalt surface with concrete base and asphalt surface with asphalt base (R. 159). The bituminous surface road is made by building an earth type base of some local material and covering it with asphalt as a wearing surface about 3/4 of an inch thick. Such roads are primarily designed for automobile traffic and are not well adapted to heavy loads. They can be constructed at a much cheaper price than concrete pavement. Due to the lack of funds and the demand from the public for surfaced roads, we have had to take what funds we had and spread it over a large mileage, and that is about the only way we could get all-weather roads. These bituminous surface roads comprise about one-third of the surfaced mileage in the State Highway System. Wherever there has been heavy traffic on these bituminous surface roads they have not held up (R. 161-163). There is bituminous surfacing of this kind or other like surface treatment of some kind on practically every road throughout the State. Where there has been heavy truck traffic on bituminous surfaced roads, such traffic immediately caused failures and ruts developed in the surfacing. The wheels of the trucks would sink in and the shoulders were pushed

up. The witness then retraced a part of the route followed by the witness Harry Tucker, pointing out a number of weak bridges and the stretches of bituminous surface on that route and then stated that weak bridges and bituminous surfacing are scattered throughout the State, that on some roads there are more weak places than on others. Also there are stretches of unpaved dirt roads scattered throughout the State Highway System. The dirt roads cannot carry heavy loads (R. 169-170-171). There are about fifty miles of bridge work in the State Highway System and about seventy-five per cent of that mileage has been designed to carry a load not in excess of ten tons (R. 174).

The foregoing testimony of the appellees' witnesses and the appellants' witness comprises the entire testimony as to the extent and continuity of a system of concrete highways. The only other evidence on this point is appellees' Exhibit No. 6 which is in two sheets (R. 300). These two sheets purport to show the Federal Aid Highway System in South Carolina corrected to May 1, 1936, and are published by the Bureau of Public Roads of the Department of Agriculture (R. 137, 198). Their printed legend evidences that they show the Federal Aid Highway system, the portions of such system improved with Federal aid, the portions otherwise improved, the portions of the system under construction, and the types of surfacing of the roads. They show all of the roads described in the decree. An examination of this official map, which is appellees' exhibit, clearly shows that there is no connected and continuous system of concrete highways in South Carolina. Every highway mentioned in the court's decree, and every highway shown on Exhibit 6, has substantially long stretches of bituminous surfacing, macadam, sand-clay, gravel or earth roads. The mileage of the various types of surfacing are shown, by our measurement from this map, in the following table:

Route	Concrete surfacing	Bituminous surfacing	Macadam surfacing	Sand-clay surfacing	Earth surfacing	Not specified	Total
No. 1							
Miles	83.0	71.0	10.2	....	....	....	164.2
%	50.5	43.3	6.2	....	....	....	100.0
No. 15 (Note 1)							
Miles	102.0	17.4	11.0	....	5.5	7.5	145.4
%	70.2	12.0	7.5	....	3.8	6.5	100.0
No. 17							
Miles	133.0	32.4	19.8	....	....	32.4	217.6
%	61.1	14.9	9.1	....	....	14.9	100.0
No. 21							
Miles	150.0	27.6	17.3	17.3	3.2	....	215.4
%	69.7	12.8	8.0	8.0	1.5	....	100.0
No. 25							
Miles	126.0	7.9	0.8	....	....	....	134.7
%	93.5	5.9	0.6	....	....	....	100.0
No. 29							
Miles	88.5	15.0	....	....	....	....	103.5
%	85.6	14.4	....	....	....	....	100.0
No. 52							
Miles	94.0	38.6	11.8	7.9	1.6	....	153.9
%	61.1	25.1	7.7	5.1	1.0	....	100.0
Total							
Miles	776.5	209.9	70.9	25.2	10.3	41.9	1,134.7
%	68.5	18.5	6.2	2.2	0.9	3.7	100.0

NOTE 1.—The decree names as one of the highways "15–A". No highway so designated is shown on the maps in evidence, but No. 15 is. The mileage for 15 is, therefore, included in the above table.

In the map legend, surfaces of bituminous materials are not differentiated to show which are bituminous top on gravel, macadam and similar bases, and which are bituminous concrete, that is, bituminous top with concrete base. The bituminous surfacing shown in the map exhibit 6 therefore includes both. Williamson testified (R. 163) when speaking of low type bituminous surfacing, that there were some sections of that type pavement on practically every road in the State. As shown by the above tabulation, highway No. 29 has only 15 miles or 14.4 per cent of its surfacing of materials other than concrete. It is reasonable to conclude that some if not all of this 15 miles are covered with the low type surfacing referred to. Since the burden is on appellees, and since the bituminous surfacing is not shown to be bituminous concrete, we can not assume that any of the 209.9 miles shown in such column is bituminous concrete. The record clearly shows that only 40 per cent

of the State system, considered as a whole, is surfaced with concrete and bituminous concrete. Surely the State system, taken as a whole, can not be considered to constitute a connected system of concrete roads.

The specifically designated routes are therefore presumably the best in the State and are those which form the so-called well connected system to which the court referred. From this it may be seen that only 68.5 per cent of that mileage or about two-thirds of it are proven by the record to be of concrete of the type which forms the basis of the decree. Not a single one of such roads is proven to be all of concrete and, even if the bituminous surfacing could be assumed to be all bituminous concrete, of which there is no proof, there remains thirteen per cent of the total mileage which the court finds is incapable of supporting the loads permitted by the decree.

It is submitted that the foregoing evidence does not sustain Finding of Fact No. 18 (R. 81) or paragraph one of the decree (R. 85) which, based on such finding, enjoined enforcement of the law upon certain highways comprising the "great arteries of commerce through the state of South Carolina" because such highways "are of standard concrete paving as above described with the exception of a few short stretches a few miles in length which are not of sufficient importance to justify the denial of the use of these arteries of commerce for the use for which they were constructed."

We further submit that the court's finding that there are only a few short stretches of pavement other than concrete, which are a few miles in length, which are not of *sufficient importance* to justify the denial of the use of such roads for the purpose for which they were constructed (Finding of Fact 18), is wholly unjustified, on the record before it. Furthermore, it is not a finding of pure fact but a conclusion. We submit on authority of cases heretofore cited that whether or not gaps in a stretch of concrete road are of suf-

ficient length to be important or unimportant is wholly a question for the exclusive determination of the Legislature.

The record shows that concrete pavement costs from $30,000 to $35,000 per mile (R. 174). There are about 358 miles in the definite segment not shown to be concrete and which might necessarily require concrete construction. At the above figures such construction would cost in excess of ten millions of dollars. The Legislature had a perfect right to consider whether or not the State could afford such an expenditure or whether it preferred to pave other roads in the State before those in such segment. The record shows that traffic over roads other than concrete or bituminous concrete will destroy the road and the court finds the limits reasonable as to such other types of pavement. The mere fact that the enforcement of the law has been enjoined since its inception without visible signs of pavement failure is no proof as to the volume of heavy trucks which operated contrary to the terms of the Act nor that the damage has not been done without it being presently apparent. For through traffic a road is no better than all of its parts. If gaps or portions of a highway are impassable, through traffic on the entire route is frequently impossible. All these and many others were proper subjects for legislative determination alone, and the court was clearly wrong in either finding that an interconnected system of highways exists or that the portions of the named roads not paved with concrete were unimportant. Since the decree was based on the capacity of a presumed interconnected system of concrete roads, which system is not shown to exist, this furnishes another reason for the reversal of the decree. Considered alone this reason is sufficient. Added to other reasons here shown it becomes even more compelling.

3. *The statute is reasonable and necessary as a means of protecting all of the highways and bridges in the State and as a means of promoting safety in their use and the court erred in holding it unreasonable because it had concluded that it was unreasonable as applied to vehicles on a limited portion of the State's highways* (Assignments of Error Nos. 4, 5, 24, 28, 29).

The court held in its second conclusion of law and by paragraph (3) of its decree that the statute is reasonable as to all of the 60,000 miles of highways in the State except those described in paragraph (1) of the decree (R. 84, 85, 86). It then proceeds to separately consider the relationship between the limitations and the limited mileage last above mentioned, to conclude such limitations are unreasonable on such limited mileage, and to enjoin the enforcement of the Act in so far as operations over such mileage are concerned, provided vehicles operated there do not exceed 96 inches in width.

In this respect it is our contention that the decree and action of the court is fatally defective in two different respects, and that in its finding of reasonableness as to all but such limited mileage the court convicts itself of its own error. Such defects are: (a) That in enacting and administering regulations pertaining to the use of public highways a State may treat all of its roads and streets as a whole, and that in testing this reasonableness of legislative action in such cases the entire highway system, as a single entity, must be considered, and that the fact that such limitations might be unreasonable as applied to a limited portion of the total mileage (which we do not concede in this case) is not enough to justify the conclusion that the statute is unreasonable and, hence, invalid, either in its application to all of the roads, or in its application to a limited portion of the same, and; (b) That the court is without

power to arbitrarily (and indefinitely) classify the public highways of the State and sustain a statute, Statewide in its terms, as it applied to part of the roads and enjoin its enforcement as to the remainder, for to do so constitutes a clear case of improper judicial legislation.

Our position as to the absence of *power* in the court to so segregate, classify and separately treat the highways of the State, resulting in the invalidity of the decree *as a matter of law,* will be argued under our Point IV of this brief. Our purpose, at this point, is to show that, since the statute was Statewide in its application, in the light of all the circumstances shown of record and of which the court may take judicial notice, the statute is reasonable *as a matter of fact,* and that the court erred in failing to reach that conclusion.

We submit that in this respect there are at least two broad factual considerations, either of which is sufficient to sustain the conclusion of reasonableness. We contend, first, that the Statewide application of the statute to all highways in the State, without exception, was reasonable and necessary to protect the 57,000 miles of roads in the State not surfaced with concrete or bituminous concrete, and, second, that its Statewide application without exception was reasonable and necessary to protect the thirty-seven and one-half miles of bridges in the State system, constituting seventy-five per cent of such bridges, which were not built to sustain a gross load of more than 20,000 pounds, plus the unnumbered other bridges in the remaining miles of public highways in the State, not part of the State system. We contend in both the above instances the statute was reasonable and necessary not only as a means of protecting the State's property but also as a safety measure.

The decree enjoins the enforcement of the Act as to certain roads described therein, and as to "such portions of

other Federal aid highways as may be of standard concrete or concrete and asphalt construction'' (R. 84, 85, 86).

Incidentally, we observe that there is nothing in the record to clearly define ''*Standard* concrete or *standard* concrete and asphalt construction''. The adjective ''standard'' was indiscriminately used by witnesses for both parties before the lower court, but the record shows that some concrete is seven and one-half inches thick at the sides and six inches thick at the center and that other concrete is eight inches thick at the sides and six and one-half inches thick at the center. Whether or not there is concrete of other dimensions does not appear. If all concrete was intended the term ''standard'' was unnecessary and serves no purpose but to confuse. If it had some meaning it should have been defined. We further submit that there is no practical means for one operating a truck to distinguish between bituminous concrete and bituminous roads without such concrete base. To one driving over the highways the kind of materials beneath the surface can not be readily determined. Had the Legislature been guilty of such slipshod draftsmanship the lower court itself would probably have enjoined its pronouncement under the rule in *Smith* v. *Cahoon*, 283 U. S. 553.

The record shows that all public highways in the State are interconnected and that a vehicle operating on one road, without encountering any physical barrier, may be driven over and upon any public road in the State.

That such vehicles actually are driven over all roads affirmatively appears in the record. Fertilizer *must* be delivered by heavy trucks right to the ''farmer's cotton row or tobacco row'' (R. 199). Net loads of 20,000 pounds of melons are loaded right on the farm (R. 153). Vegetable trucks weighing more than 20,000 pounds pick up full loads on the farm (R. 108, 152). Household goods are moved by van load greatly exceeding 20,000 pounds weight and are

delivered to destination anywhere in the State (R. 145). The witness Williamson testified regarding roads which bear traffic of heavy trucks: "All of them are subject to some. There are trucks on practically every road in the State, it has been my observation. There are some trucks on every road, every station that I come to" (R. 163). Obviously these operations take the trucks off the concrete highways specified in the decree to the rural roads and city streets.

The record also clearly shows that such highways are of all kinds of construction (R. 126, 159). The record also shows that different kinds of soil in the subgrade vary in their supporting power and result in different strength or capacity of the surfacing which covers them (R. 160), that such subgrade conditions make such a great difference in the supporting power that "some concrete pavement in one section may hold up 100,000 pounds", but that "the same identical pavement, as far as construction goes, may break up under a two or three thousand pound load" (R. 160). The record also shows a great variety of subgrade conditions in South Carolina (R. 179).

With reference to bridges the record shows that there are about fifty miles of bridge work in the State Highway System alone and that of these bridges about 75 per cent have not been designed to carry a load in excess of ten tons, the amount provided in the statute (R. 174). This testimony is not controverted.

It is common knowledge that weak and insufficient bridges are numerous and common on public highways in South Carolina and elsewhere. An interesting description of that situation and its effect is found in articles appearing in the September 1936 issue of "Scientific American", entitled "Horse and Buggy Bridges" at page 138 and in the September 1936 issue of "Readers Digest", entitled "Forgotten Bridges" at page 53.

The Court found, (Finding of Fact 25), and there was evidence to support it, that a gross weight limitation is of importance, and by that we presume proper, in connection with the use of bridges, although it disagreed with the Legislature as to the amount of the gross weight limitation as applied to "modern bridges". Appellees did not appeal from such finding. The Court found (Finding of Fact 26), and the evidence supports it, that the assailed limitations are not unreasonable as applied to all but the definite and indefinite segments of roads mentioned in the decree, thereby concluding them to be reasonable as to some 57,000 miles of public highways which remained both within and without the State system. From this finding the appellees did not appeal.

By such finding the Court identified the statute. It found the legislative action to be within the *power* of the Legislature, that there was a sufficient relationship between the statute, as the means, and the end which was within the legislative power, as to result in the statute's validity. We submit that by such action the Court did enough to hold the statute valid in its entirety, and that its own finding in this respect, is the proof of the invalidity of its act in holding the statute invalid as it applied to part of the roads.

Bearing all these uncontroverted facts in mind, it is submitted that the Legislature had the absolute right to consider and to judge all of the practical problems involved in the enactment and application of the statute in question. There are readily obvious problems of administration if the roads are to be classified and different weight and size vehicles permitted on different roads. How many classes should be made for the different types of roadway and different types of vehicles? What weather, seasonal and traffic conditions should influence the permitted weights? What will happen to detour roads while gaps in a strong system are being built? Can heavy vehicles be practically confined

to a limited mileage of stronger roads? Will congestion result on these so-called arteries while loads are being transferred from large to small vehicles? How can the law be enforced? How many patrolmen would be required and what would it cost? Will the mere posting of a sign on a weak bridge prevent the driver of a truck from passing over it? If the admonitions of the sign are disregarded what would be the result to the bridge and would the safety of others be endangered by such disregard? Would officers have to be stationed at such bridges to enforce the limitations and, if so, what would it cost? If heavy loads are to be permitted on the approaches to a bridge but prohibited on the bridge, as is provided in the decree, must an officer stationed there stand like Horatio and defy the drivers of units thought to be too heavy without power to arrest or even to weigh the threatening vehicle until the line is crossed and the damage is done?

In the light of all these circumstances, the Legislature saw fit to lay down one limitation covering all of the roads of the State and applicable alike to interstate and intrastate commerce.

All these and many others are practical questions which, in the wisdom of the courts throughout the years, have been left to the exclusive discretion of the Legislature. We submit that when these and many other practical problems are fairly considered it is readily obvious that, in the enactment of the statute, the Legislature did not attempt to exercise a forbidden control over interstate commerce in the guise of a police measure, but wisely and fairly adopted a measure honestly intended to protect its roads and bridges, and the safety of those who use them, to promote, and not prevent, interstate commerce by passenger automobile and light trucks by preserving smooth all-weather roads over which they may travel, and to conserve the State's finances by surfacing in the future more miles of the remainder of

its roads with materials adequate to support the loads permitted by the statute, yet inadequate to accommodate those permitted by the decree.

We further submit that the Statewide application of the statute, without geographical exception, was wholly justified and reasonable, either as a means of protecting the 57,000 miles of roads not included in the segment described in the decree, or as a means of protecting the thirty-seven and one-half miles of bridges in the State system which were not designed to carry heavier loads, plus the unnumbered others on the 57,000 miles of highways and city streets remaining. When both legitimate objects are considered together, it seems conclusive that the statute is and should be considered reasonable as a matter of fact, and that the lower court should be reversed.

This Court has repeatedly sustained the power of a state legislature to consider a problem of this character in its entirety and to refuse separate treatment of separate classes because of the administrative difficulties which might be incurred in so doing. In *Aero Mayflower Transit Co.* v. *Georgia Public Service Comm.*, 295 U. S. 285, an interstate motor carrier claimed a flat fee was an unreasonable one for highway use because he made only a limited use of the entire State road system. In that case, the Court said:

> "The appellant urges the objection that its use of roads in Georgia is less than that by other carriers engaged in local business, yet they pay the same charge. The fee is not for the mileage covered by a vehicle. There would be administrative difficulties in collecting on that basis. The fee is for the privilege for a use as extensive as the carrier wills that it shall be. There is nothing unreasonable or oppressive in a burden so imposed."

It will be observed that in that case, in passing upon the reasonableness of a tax assessed against interstate carriers,

the Court not only considered administrative difficulties but also took into consideration the highways of the State as a whole and found the fee reasonable for the privilege of using all of the roads even though it might have been excessive for the use of a limited portion of such system.

The Supreme Court of Wisconsin pursued the same principle in *Interstate Trucking Co.* v. *Damman,* 241 N. W. 625, 630. In that case interstate motor carriers challenged the State fee as an unreasonable burden, contending that the amount of the fee was made excessive by reason of the costs incurred by the State in maintaining highways and in carrying on other activities not utilized by or benefiting interstate motor carriers. On that point, the Court said:

> "Plaintiffs call attention to the allocation for fire roads. Section 20.49 (6) Stats. Roads within the forest preserves are nevertheless public roads and an integral part of the state highway system. They may not be used ordinarily by interstate truckers, but neither are many town roads. *The rule does not require an allocation to the particular road used by the trucker who is taxed.* Another allocation is for purchasing timber land adjacent to highways. Section 20.49 (7a), Stats. This was apparently intended to preserve timber along some of the highways to add to the attractiveness of the highways from a scenic point of view, which is clearly an incidental highway use. *The State's highway program and budget must be taken as a whole.*" (Italics ours.)

In *Carley and Hamilton* v. *Snook,* 281 U. S. 66, 74 L. Ed. 704, 50 S. Ct. 204, the Court considered a license fee required of intrastate operators, and the Commerce Clause was not in the case. Nevertheless the Court's following statement is applicable to interstate commerce, as shown by later decisions of the Court. The Court said:

> "A corollary of this contention is that although the fees are not per se disproportionate to the privilege of

operating over all the highways of the state, appellants are nevertheless entitled to receive licenses limiting the operation of their motor cars to the few highways which they wish to use, upon the payment of correspondingly reduced fees. But no constitutional principle is suggested, and we know of none, which would enable a licensee thus to regulate the extent of the privilege granted or to assail an otherwise valid tax upon it merely because a reduction of the privilege and the tax would better suit his convenience or his pocketbook."

The *Aero Mayflower* case, *supra*, decided after the *Snook* case, clearly applied that principle to interstate commerce.

This Court has always sustained the principle that difficulty of enforcement is a proper basis for defining the boundaries of a classification, or for the failure to subdivide a broad general class. In order to make a statute workable and enforceable the legislature may, in creating a classification, lay down a broad, general, easily enforceable description of a class, and if the classification is otherwise valid, the fact that some "innocent objects" are included in the class in order to "insure a reasonable margin for effective enforcement" the statute is nevertheless valid in its entirety.

In *Euclid* v. *Ambler Realty Co., supra* (272 U. S. 365), a zoning ordinance was considered in which it was urged against the validity of the ordinance that it excluded not only offensive and dangerous industries, but also the inoffensive. The Court said:

"Here, however, the exclusion is in general terms of all industrial establishments, and it may thereby happen that not only offensive or dangerous industries will be excluded, but those which are neither offensive nor dangerous will share the same fate. But this is no more than happens in respect of many practice-forbidding laws which this court has upheld, although drawn in general terms so as to include individual cases that may turn out to be innocuous in themselves. (Citing cases.) *The inclusion of a reasonable margin to insure*

> *effective enforcement will not put upon a law, otherwise valid, the stamp of invalidity.* Such laws may also find their justification in the fact that, in some fields, the bad fades into the good by such insensible degrees that the two are not capable of being readily distinguished and separate in terms of legislation." (Italics supplied.)

In *Purity Extract and Tonic Co.* v. *Lynch*, 226 U. S. 192, a statute forbade not only the sale of intoxicating liquors but also non-alcoholic malt liquors. The latter provision was sustained as a necessary aid to the enforcement of the law forbidding the sale of intoxicating liquors. The Court said:

> "It does not follow that because a transaction separately considered, is innocuous, it may not be included in a prohibition the scope of which is regarded as essential in the legislative judgment to accomplish a purpose the admitted power of the Government."

In *Silz* v. *Hesterberg, supra* (211 U. S. 31), this Court upheld the provisions of a statute, as an aid necessary, in the judgment of the Legislature, to the enforcement of the game laws of the State of New York, which made it an offense to possess certain game birds during the closed season whether they were killed within the State of New York or elsewhere. This decision was made in the face of a showing that the game birds in question had been killed in Russia during the open season and imported to New York during the New York open season, and that such birds were readily distinguishable from those native to New York, both while feathered and otherwise.

In *Holyoke Water Power Co.* v. *American Writing Paper Co.* (decided March 1, 1937), 81 L. Ed. (adv.) 383, the Court said, with reference to the complaint that an exception from the general terms of a statute should be made to fit the case

of one whose operations were not of the type at which the statute was actually aimed:

> "No principle of constitutional law, no dictate of fair dealing, lays a duty upon the Congress to single out for special treatment an individual or a few among the members of a common mass."

In *Bayside Fish Flour Co.* v. *Gentry*, 297 U. S. 422, a statute of California required licenses of those engaged in the business of canning, curing or processing fish. The appellant challenged the Act as a violation of the "Commerce Clause" and of both the "Due Process" and "Equal Protection" clauses of the 14th Amendment, showing that the fish it used were largely caught in waters outside the jurisdiction of the State. The Court held that the plain purpose of the Act was to conserve for food the fish found within the State and that its effect on interstate commerce was purely incidental. In disposing of appellant's claim that the Act violated the Commerce Clause, the Court said:

> "Sardines taken from waters within the protection of the state and those from without are, of course, indistinguishable; and to the extent that the act deals with the use or treatment of fish brought into the state from the outside, its legal justification rests upon the ground that it operates as a shield against the covert depletion of the local supply, *and thus tends to effectuate the policy of the law by rendering evasion of it less easy.*" (Italics supplied.)

See *Hebe Co.* v. *Shaw*, 248 U. S. 297, 63 L. Ed. 255, 39 S. Ct. 125, and *Pierce Oil Corp.* v. *Hope*, 248 U. S. 498, 63 L. Ed. 381, 39 S. Ct. 172.

The applicability of the above cases to the instant case is plain. In fixing the gross load limitation at a point which will protect *all* of its highways, the State is acting within its power to include "a reasonable margin to insure effective enforcement."

Under the holding in the above case the State, in order to protect 57,000 miles of highway, 96% of all public roads in the State, had an absolute right to make its limitations apply to and include traffic over the remaining four per cent. It was authorized to include within its scope all the roads in the two segments regardless of their capacity, as a means of insuring effective enforcement. Failure to exclude such roads did not result in the unreasonableness of the statute as applied to any of the roads, either under the 14th Amendment or the Commerce Clause. Because the lower court so held, the decree is erroneous and should be reversed.

4. *Crediting appellees' evidence with all the effect which may properly be attributed to it, the reasonableness of the statute remains a fairly debatable question which should have been left to the Legislature* (Assignment of Errors Nos. 16, 24, 27).

From all the cases cited above it is clear that fairly debatable questions as to the reasonableness of a statute enacted to accomplish an end, which end is within the power of the Legislature, are those which should be left to the exclusive determination of the Legislature. *Sproles* v. *Binford, supra* (286 U. S. 374); *N. Y., N. H. & H. R. Co.* v. *New York, supra* (165 U. S. 628); *N. C. & St. L. R. Co.* v. *White,* 278 U. S. 456; *Silz* v. *Hesterberg, supra* (211 U. S. 31); *Bayside Fish Flour Co.* v. *Gentry, supra* (297 U. S. 422); *McLean* v. *D. & R. G. R. R. Co.,* 203 U. S. 38; *Morris* v. *Duby, supra* (274 U. S. 135); *Standard Oil Co.* v. *Marysville, supra* (279 U. S. 582); *Zahn* v. *Board of Public Works,* 274 U. S. 325; *Euclid* v. *Ambler Realty Co., supra* (272 U. S. 365).

A careful review of the record, and of the facts of which the Court may take judicial notice, clearly shows that there are several fundamental considerations sustaining appellants' position in regard to which there is no conflict in the evidence and that there remain numerous factors

bearing on the reasonableness of the statute which, when crediting appellees' showing with the greatest effect that can fairly be attributed to it, leave fairly debatable questions for the exclusive determination of the Legislature.

There is *no* evidence to show that the statute is unreasonable (1) as a means of protecting all of the highway bridges in the State except for twenty-five percent of those on the 6100 miles of roads in the State system, or of protecting the safety of those who use them, or (2) as a means of protecting the more than 57,000 miles or about 96 percent of all the roads in the State not surfaced with concrete or bituminous concrete pavement, or the safety of those who use them, or (3) that certain portions of even the definite segment of the State's highways are not surfaced either with concrete or bituminous concrete. As shown above, we submit that these undisputed facts which are conclusively shown in the record, are enough to reverse the lower court's decree.

We further submit that in the light of all the circumstances argued above, of the conflict in the testimony outlined above, and of the facts which the Court may and should judicially notice there are many questions bearing on the question of reasonableness which the most appellees have succeeded in doing is to show that they are fairly debatable. Since the burden is on appellees to show that the statute is so arbitrary and unnecessary as to admit of no reasonable difference of opinion as to its unreasonableness we submit that appellees have failed to sustain such burden, that such failure is fatal to their case and that the decree should be reversed.

Such questions which are not shown to be resolved against appellants or which are at least fairly debatable include the following: Is the statewide application of the statute reasonable as a means of protecting both the bridges and the

roads and the safety of traffic upon them? Is the statewide application of the statute reasonable as a means of establishing a standard for future highway construction or reconstruction? Is there a real relationship between a gross load limitation, in general, or the 20,000 pounds gross load limitation in particular, and the protection of the South Carolina pavements either concrete or otherwise, or between such limitations and the safety and convenience of those who use the roads? If the gross load limitation in question is reasonable, is there a real relationship between the provision that a tractor-semitrailer shall be considered as one unit for determining gross load and the protection of the roads? Is wheel and axle load the only reasonable limitation for vehicles using the roads of the State and are the roads in question capable of supporting axle loads of 16,000 to 18,000 pounds when they are not surfaced with concrete, when they are so surfaced, or when 60 percent of the concrete surfacing is without center joint? Is a 90 inch, as contrasted with a 96 inch, width limitation reasonable as a means of protecting either the roads and bridges or the safety of those who use them? Does a well connected system of concrete paved roads exist in South Carolina and are the gaps in the definite segment which are not surfaced with concrete "important" or "unimportant"?

We submit that all these, and many others, are questions in this case which have either been answered in favor of the statute or remain unanswered, and that those which are unanswered are fairly debatable; that each has a material bearing on the reasonableness of the statute when it is charged that the statute is either a violation of the Commerce Clause or the 14th Amendment, and that the Court erred in undertaking to decide such questions and that the decree should therefore be reversed.

III.

The Court's conclusions as to the invalidity of the statute are erroneous because based upon improper tests of reasonableness (Assignments of Error Nos. 12, 19, 20, 21, 24).

It is obvious from the District Court's opinion that it was decisively influenced by three factors which actually are wholly irrelevant to any issues of fact or law in the case. These are the following: (1) The Court thought that the Federal Highway Act (Secs. 1 to 56, Title 23, U. S. C.), and (2) that the Motor Carrier Act, 1935 (Secs. 301 to 327, Title 49, U. S. C.) in some way circumscribed the State's power to enact weight and width limitations statutes, and (3) the Court also in the 7th to 16th findings of fact (R. 78-81) laid great stress upon the alleged inconvenience, expense and loss occasioned interstate truckers and their shippers by the statute, and applied all of such factors as tests of reasonableness.

It is evident that the Court's emphasis on these three factors arose, in part, from erroneous conclusions the Court drew from four decisions of this Court: *Buck* v. *Kuykendall*, 267 U. S. 307 (R. 72); *Bush* v. *Malloy*, 267 U. S. 317 (R. 74); *Morris* v. *Duby*, *supra* (274 U. S. 135) (R. 71); *Nashville, C. & St. L. Ry.* v. *Walters*, 294 U. S. 405 (R. 68).

At this point we will endeavor to show the errors of the District Court in the above respects and in so doing will first discuss the three above described factors, then point out the effect of the Court's erroneous application of the four decisions above cited to the Court's consideration of such three factors.

The Three Above Factors.

It is conclusively settled by the decisions of this Court that these three factors, singly or in combination, are

wholly irrelevant to the issues in this case. We discuss them in the above order.

(1) *The Federal Highway Act:*

Preliminary to a discussion of this and the Motor Carrier Act, 1935, consideration must be given to the effect of an Act of Congress upon state police power statutes.

Where, as here, a State has power to act in the absence of national legislation, it is the uniform holding of all the decisions of this Court that such power is superseded by an Act of Congress *only* when the Act actually conflicts with the state law in issue. As was said in *Townsend* v. *Yeomans,* No. 781, decided May 24, 1937, 81 L. Ed. (adv.) 840, 847:

> "The case calls for the application of the well-established principle that Congress may circumscribe its regulation and occupy a limited field, and that the intent to supersede the exercise by the state of its police power as to matters not covered by the federal legislation is not to be implied unless the latter fairly interpreted is in actual conflict with the state law" (citing cases).

In *Carey* v. *South Dakota,* 250 U. S. 118, it was held that the Federal Migratory Bird Act did not displace a state law which forbade the shipping out of the state of wild duck killed in season, because the Federal Act did not cover the precise subject matter of the state act. Authority to this effect could be multiplied almost indefinitely. See *Mintz* v. *Baldwin,* 289 U. S. 346, and *A., T. & S. F. R. Co.* v. *Railroad Commission,* 283 U. S. 380, and cases therein cited.

The rule apparent from the foregoing cases is this: *Where the Act of Congress does not actually supersede state power, then such Act has no effect whatsoever upon the state power.* It is clearly a case of "all the one thing or all the other." Every decision of this Court on this

subject has so held. This Court has *never* held that an Act of Congress which did not supersede State power, did in *any way* affect the State power. The attitude of the District Court on this point is contrary to every decision of this Court. *Buck* v. *Kuykendall, supra,* and *Bush* v. *Maloy, supra,* do not support the District Court.

Applying this and other principles it is plain that the Federal Highway Act does not and was never intended to in any way affect State power *to enact weight and size limitations.*

(a) The Act shows by its terms not only that Congress did *not* intend to occupy the field of weight and size limitations but also shows affirmatively the intention of Congress to *leave this power to the States.* Thus it restricts State powers in certain particulars but does not mention weight or size limitation; by Section 9 the aided highways are required to be "free from tolls of all kinds" and by Sections 15 and 48 the States are required to maintain the aided roads. These are the only provisions of the Act limiting State power or imposing duties on the States with respect to completed highways. By expressly restricting State power in these respects and by failing to mention the subject of weight or size limitation, Congress showed its intention to leave weight and size limitation to the States. *Sturges* v. *Draper,* 12 Wall. 19, 27; *Walla Walla* v. *Walla Walla Water Co.,* 172 U. S. 1, 15. By Sections 8 and 10 of the Act the approval of the Secretary of Agriculture in certain respects is required before Federal aid can be extended for new highway construction; and by Section 19 the Secretary is authorized to make such *recommendations* to the State highway departments (*not the State legislatures*) "as he may deem necessary for preserving and protecting the highways and insuring the safety of traffic thereon." The adoption of the recommendations

authorized by Section 19 are not included in the conditions precedent to granting of Federal aid which the Secretary may require under the authority of Sections 8 and 10; furthermore, whatever may be the powers conferred on the Secretary by Section 19 he has never prescribed weight or size limitations. See *Northwestern Bell Tel. Co.* v. *Nebraska State Railway Com.*, 297 U. S. 471, 478, 479.

In *Carley & Hamilton* v. *Snook, supra* (281 U. S. 66), a law of California requiring motor vehicle license fees was attacked on the ground that such fees were forbidden by Section 9 of the Federal Highway Act which requires Federal aid highways to be "free from tolls of all kinds." In upholding the California statute the Court said, (page 74):

> "Such fees were a common form of state license tax before the Federal Highway Act was adopted in 1921. That act contemplated the continued maintenance by the states of state highways, constructed with Federal aid. the expense of which must necessarily be defrayed from revenues derived from state taxation. *It cannot be supposed that Congress intended to procure the abandonment by the states of this well-recognized type of taxation without more explicit language than that prohibiting tolls found in Section 9.*" (Italics supplied.)

Paraphrasing the above, it assuredly cannot be supposed that Congress having restricted State power in certain particulars in the Federal Highway Act, intended to restrain State power to enact weight and size limitation laws without more explicit language than is contained in the Act.

(b) Since the States by Sections 15 and 48 of the Federal Highway Act are required to maintain the Federal aid highways, it follows that state weight limitation laws are the sole concern and function of the State since they are the greatest factor in maintenance. The reasoning in

Carley & Hamilton v. *Snook, supra,* that State license fee laws are not prohibited by Section 9 because, for one thing, States must maintain the highways, applies with equal force to the proposition that State weight limitation laws are likewise left to the State.

This Court calls attention to the provisions of the Federal Highway Act requiring maintenance by the State as evidencing one of two separate grounds justifying the right of the State to fix motor vehicles weight limitations irrespective of the Act, in *Morris* v. *Duby, supra,* (274 U. S. 135), as follows:

> "Conserving limitation is something that must rest with the road supervising authorities of the state not only on the general constitutional distinction between national and state powers, but also for the additional reason having regard to the argument based on a contract that under the convention between the United States and the state in respect to these jointly aided roads, the maintenance after construction is primarily imposed on the state."

(c) Any agreement to relinquish police power over its highways that might be found or implied in the acceptance by a State of Federal aid would be invalid for two interrelated reasons, (1) that a State cannot surrender such powers by anything short of a constitutional amendment, and (2) that the exaction of such an agreement from a state as a condition to receiving Federal aid is beyond the power of the Federal Government and would render the agreement and the appropriation of Federal aid unconstitutional. *U. S.* v. *Butler,* 297 U. S. 1, *Ashton* v. *Cameron County Water Improvement Dist.,* 298 U. S. 513.

It is thus apparent from the above that the Federal Highway Act does not and was never intended to in any way affect State power to enact weight and size limitations because (a) the Act itself shows the intention of Congress not

to occupy that field and affirmatively shows its intention to leave such power to the States; (b) the responsibility for maintenance, exclusively in the State, carries with it the power and duty to fix size and weight limits as a means of preservation, and (c) the convention between the Federal Government and the States is not an agreement by the States to relinquish police power over its highways because the States have no constitutional power to make such agreement and the Federal Government has no constitutional power to require it as a condition precedent to the receipt of Federal aid.

(2) *The Motor Carrier Act, 1935:*

The District Court held that this Act did not supersede the size and weight laws in question (Fourth conclusion of law, R. 84; Opinion, R. 57-64). Appellees did not take any cross-appeal. Every court to which this question has been presented has reached the same conclusion, obviously the only one possible.

L. & L. Freight Lines v. *Railroad Comm. of Florida*, 17 Fed. Supp. 13;

Werner Transp. Co. v. *Hughes*, 19 Fed. Supp. 425;

Houston & North Texas Freight Lines v. *Phares*, 19 Fed. Supp. 420;

Railroad Comm. of Texas v. *Southwestern Greyhound Lines*, 92 S. W. (2d) 296;

Werner Trans. Co. v. *O'Brian* (decision not published, D. C., S. Dist. Iowa, Feb. 15, 1937).

For the reasons stated at the beginning of (1) above, it is clear that the Motor Carrier Act, 1935, does not in any respect modify the exercise of State power in issue.

(3) *Inconvenience, Expense and Loss Occasioned Interstate Truckers and Their Shippers by the Statute:*

In Findings of Fact Nos. 7 to 16, inclusive (R. 78-81), the District Court recites the inconvenience that would be caused by enforcement of the South Carolina laws. We submit that (a) such findings and evidence bearing on them are wholly immaterial to any of the issues in this case; (b) that the appellants were under no obligation to rebut such evidence, and (c) that even without any attempt by the appellants to rebut such evidence, its weight, in the light of other evidence in the record, is insufficient to support such findings.

These findings dwell at great length upon the alleged inconvenience to interstate truckers and their shippers as the result of the enforcement of the Act. As will be hereafter indicated, such findings were *controlling influences,* in the lower court's conclusions as to the unreasonableness of the Act. It is elementary that if the power in the State exists and that if the means adopted bears a reasonable relationship to the exercise of that power, the consequent effect upon interstate commerce of the exercise of that power is entirely immaterial.

In the Court's opinion in the case of *Erie Railroad Co.* v. *Board of Public Commrs.,* 254 U. S. 394, is found a strong statement to that effect. There the railroad had been directed to pay the expense of eliminating fifteen grade crossings. The requirement was made in the exercise of the State's police power. The railroad challenged the Act, among other reasons, as imposing an unreasonable burden on interstate commerce. The case was decided in 1921 long after the enactment of the Interstate Commerce Act. The railroad was a part of an inter-connected national system of railways. The railroad contended, as do appellees here, that the Act must be reasonable in order to be upheld. It

put in evidence that it did not have assets sufficient to make the changes, at least without interfering with the proper development of its interstate commerce and contended that it was "not reasonable to require an expenditure of $2,000,000 from a company that has not more than $100,000 available." The order, and statute upon which it was based, were upheld solely upon the power of the State to provide for the safety of its citizens and the duty of the interstate carrier to contribute to the accomplishment of that legitimate object as establishing the relationship between the order and its object. The consequent effect of the order on interstate commerce was disregarded and in that respect, when speaking of public thoroughfares, the Court said:

> "Grade crossings call for a necessary adjustment of two conflicting interests—that of the public using the streets, and that of the railroads and the public using them. Generically the streets represent the more important interest of the two. There can be no doubt that they did when these railroads were laid out, or that the advent of automobiles has given them an additional claim to consideration. They always are the necessity of the whole public, which the railroads, vital as they are, hardly can be called to the same extent. Being places, to which the public is invited, and that it necessarily frequents, a state, in the care of which this interest is, and, from which ultimately the railroads derive their rights to occupy the land, has a constitutional right to insist that they shall not be made dangerous to the public, *whatever may be the cost to the parties introducing the danger.* That is one of the most obvious cases of the police power; or, to put the proposition in another form, the authority of the railroads to project their moving masses across thoroughfares must be taken to be subject to the implied limitation that it may be cut down whenever and so far as the safety of the public requires." (Italics supplied.)

Likewise, it can be said in this case as between trucks and the highways of South Carolina the highways represent the more important interest of the two. They always are the necessity of the whole public, while the trucks, vital as they are, hardly can be called to the same extent. Being places to which the public is invited, and that it necessarily frequents, the State, in the care of which this interest is, and from which, ultimately, the trucks derive their right to occupy the roads, has a constitutional right to insist that its highways shall not be made dangerous to the public, *whatever may be the cost to the parties introducing the danger.* The authority of the trucks to project their moving masses along highways must be taken to be subject to the implied limitation that it may be cut down whenever and so far as the safety of the public requires.

Again, and on the same page, the Court said:

> "It is said that if the same requirement were made for the other grade crossings of the road it would soon be bankrupt. *That the states might be so foolish as to kill the goose that lays the golden eggs for them has no bearing on their constitutional rights.* If it reasonably can be said that safety requires the change, it is for them to say whether they will insist upon it and neither prospective bankruptcy nor engagement in interstate commerce can take away this fundamental right of the sovereign of the soil (citing cases). To engage in interstate commerce the railroads must get onto the land; and to get on to it must comply with the conditions imposed by the state for the safety of its citizens * * * *if the burdens imposed are so great that the road cannot be run at a profit it can stop, whatever the misfortune the stopping may produce.*" (Italics supplied.)

In *N. Y., N. H. & H. R. Co.* v. *N. Y., supra* (165 U. S. 628), a New York statute requiring both interstate and intrastate trains to be heated in a certain way was challenged as an "unreasonable burden on interstate commerce."

That case was decided in 1897, long after the enactment of the Interstate Commerce Act. In that case, as here, the carriers involved were part of an inter-connected national system for transportation regarding which Congress had partially occupied the field of regulation. Concerning the effect upon interstate commerce of the enforcement of the State statute, sustained as a police measure, the Court said:

> "Counsel for the railroad suggests that a conflict between state regulations in respect of the heating of passenger cars used in interstate commerce would make safe and rapid transportation impossible; that to stop an express train on its way from New York to Boston at the Connecticut line in order that passengers may leave the cars heated as required by New York, and get into other cars heated in a different mode in conformity with the laws of Connecticut, and then at the Massachusetts line to get into cars heated by still another mode as required by the laws of that commonwealth, would be a hardship on travel that could not be endured. These possible inconveniences cannot affect the question of power in each state to make such reasonable regulations for the safety of passengers on interstate trains as in its judgment, all things considered, is appropriate and effective. Inconvenience of this character cannot be avoided so long as each state has plenary authority within its territorial limits to provide for the safety of the public according to its own views of necessity and public policy, and so long as Congress deems it wise not to establish regulations on the subject that would displace any inconsistent regulations of the states covering the same ground."

Sproles v. *Binford, supra,* is specific authority on this point. The record in that case shows that the District Court made exactly the same findings with reference to shippers and truck operators in Texas as did the lower court in this case. This appears at the bottom of page 383

of this Court's opinion. The possibly greater convenience of truck transportation does not prevent the Legislature from providing regulations which, within the range of its judgment, are suitable for highway conservation. *Sproles* v. *Binford, supra* (at page 394). See also *Morris* v. *Duby, supra* (at page 144). The fish and game cases are also authority for this proposition. In *Bayside Fish Flour Co.* v. *Gentry,* 297 U. S. 422, and in *Silz* v. *Hesterberg, supra* (211 U. S. 31), as in this case, the State's police power was invoked to *preserve the State's property.* In those cases, the acts were sustained even though they *prohibited* foreign commerce. See also *McLean* v. *D. & R. G. Ry. Co., supra* (203 U. S. 38).

From the above, it is clear that it is established law that the consequent effect upon interstate commerce of the exercise of a State's police power is entirely immaterial. On the same authority, it is just as clear that *such effect, being immaterial, cannot, conversely, be applied as a test of the reasonableness and consequent validity of a police power measure.* As will be hereafter shown, the lower court did consider the effect upon interstate commerce of the enforcement of the South Carolina statute *as a test of its reasonableness.*

It is submitted that, since the voluminous evidence introduced by appellees bearing upon the effect of the enforcement of the Act was wholly immaterial as a test of reasonableness, the appellants were entirely justified in not undertaking to rebut it. The record shows that appellants made no such effort, which should be considered in weighing the effect of the great volume of appellees' evidence on the subject.

It may be that such evidence was admissible to show appellees' interest as plaintiffs or to show that the statutes complained of constituted a burden on interstate commerce as *preliminary* to a showing that such burden was an *un-*

reasonable one. However, the statistics of truck registrations in South Carolina do not support the inference that higher weight limitations are desired upon the South Carolina highways by more than a very small percentage of truck operators and industries in general. Of the 30,497 trucks registered in South Carolina in 1936, only 328 were registered for authority to carry more than three tons of net weight, and of these only 19 were registered for authority to carry more than four tons of net weight (R. 272). Carriers for hire use semi-trailer combinations of two to three tons capacity (R. 229). If there existed such a demand for heavy duty truck transportation in South Carolina, we may reasonably assume that the truck registration figures in South Carolina would show a much higher percentage of registration for authority to carry four or five tons of net load. A truck weighs less than a semi-trailer combination, and the smallest tractor semi-trailer combination weighs about twelve thousand pounds empty (R. 114). It therefore appears that the vehicles thus referred to could carry net loads of eight thousand to ten thousand pounds and still comply with the 20,000 pounds gross weight limit law (R. 114), yet only one per cent of the trucks are registered to carry eight thousand pounds, and only .06 per cent of the trucks are registered to carry as much as ten thousand pounds. On the other hand, over 27,000 of the trucks are registered to carry not more than four thousand pounds net load (R. 272).

Mr. Moorefield's statement (R. 257) reads, in part, as follows: "the total number of trucks having more than two tons capacity, together with all the busses and lighter trucks carrying trailers, now operating in the State would not exceed 3,000. This means that the State is expending $18,000,000 to accommodate 3,000 vehicles and combinations of vehicles. These 3,000 vehicles represent only a little more than one per cent of the total number of vehicles using the State

highways, while the estimate of $3,000 per mile additional construction cost necessary in order to provide for these vehicles represents about 15 per cent of the average per mile construction cost."

From the above, it is clear the Court's conclusion as to the magnitude of the alleged burden on interstate commerce was unsupported by the weight of the evidence, and that all of such evidence was immaterial and could not properly be applied as a test of the reasonableness of the statute.

It is plain that the Court erred in allowing itself to be influenced in the slightest degree, in passing on whether or not the statute in question is a violation of the commerce clause, by the consideration of either the Federal Highway Act or any developments pursuant to it, the Motor Carrier Act, 1935, or the increased cost of or inconvenience to interstate commerce occasioned by the enforcement of the statute. The only real issue is whether the South Carolina statute is a legitimate measure as a *means of protecting its highways and those who use them*, utilized by the Legislature to accomplish its admitted power to so protect.

The Four Decisions Erroneously Applied.

One of the elements which contributed to the confusion of the District Court in this respect was its failure to understand *Buck* v. *Kuykendall*, and *Bush* v. *Maloy*. The Court's peculiar misunderstanding of these cases is made plain in its opinion (R. 72, 73, 74). The lower court's fundamental difficulty was its failure to observe the well established distinction between, on the one hand, the exercise of State power which is forbidden by the Commerce Clause without action in the premises by Congress (sometimes called the exclusive power), and, on the other hand, the exercise of State power which is permitted until Congress has precisely and completely occupied the field (sometimes

rather inaccurately called the concurrent power). The distinction between these two kinds of power and the principles regarding them is explained in *The Minnesota Rate Cases* (*Simpson* v. *Shepard*), 230 U. S. 352 at 399-400, where many illustrative cases are cited, and in *Townsend* v. *Yeomans, supra,* 81 L. Ed. (adv.) 840 at 848. Of course the line of demarcation between the two is often difficult of ascertainment, but that was not the difficulty into which the District Court fell.

It is manifest that *Buck* v. *Kuykendall* and *Bush* v. *Malloy* are ruled by the first described principle, that the power the States sought to exercise in those cases was exclusively in the Congress, or, as stated in *Stephenson* v. *Binford, supra,* (287 U. S. 251) at page 266, the statutes involved in those cases imposed "discriminations relating" to interstate commerce. This was evident from the beginning, and was expressly stated in *Bradley* v. *Public Utilities Commission,* 289 U. S. 92 at 95. The *Bradley* case is an example of the second principle, that is, concurrent power which the State can exercise until Congress acts. This Court's reference in the *Buck* case to the Federal Highway Act was first explained in the *Bush* case. It was further explained in the *Bradley* case when the Court made it clear that such reference in the *Buck* case did not mean that such Act superseded or affected the State action there in question, *because such State action was invalid under the Commerce Clause without any entry into the field by Congress.* The reference in the *Buck* and *Bush* cases to the Federal Highway Act was for the purpose of showing that such Act merely made explicit in matters in the exclusive field of Congressional power the implied prohibition against discrimination contained in the Commerce Clause. The subsequent decisions of this Court have sharply confined this language to the facts of the case in which it was used, namely, to situations where

a State action invades the exclusive field and discriminates against interstate commerce.

The Court, in the *Bradley* case, said (p. 95), referring to the *Buck* and *Bush* cases:

> "The test employed was the adequacy of existing transportation facilities; and since the transportation in question was interstate, *denial of the certificate invaded the province of Congress.*" (Italics supplied.)

The *Bradley* case also expressly identified *Morris* v. *Duby, supra,* and *Sproles* v. *Binford, supra,* as falling within the second principle, that is, they involved State power which might be exercised until Congress acts, as does the latest pronouncement of the Court on this subject, *Townsend* v. *Yeomans, supra.* The *Bradley* case did not turn on the failure of the interstate carrier to show that no other route was available for its purpose. Reference to such failure was made to show that the primary purpose of the Ohio Act in question was to prevent highway congestion, thus identifying the Act as one in the field where the States may act until Congress sees fit to do so. *Morris* v. *Duby, supra,* was decided two years after the *Buck* and *Bush* cases. In that case the Court referred to the *Buck* case as authority for the proposition "that the state may not discriminate against interstate commerce" and held that notwithstanding the Federal Highway Act conserving limitation is something which must rest with the road supervising authorities of the state.

Morris v. *Duby* requires more than a brief analysis on the point now under discussion because of the way the District Court misunderstood and misapplied it. In its opinion (R. 68, 71) and in a preliminary statement at the commencement of the trial (R. 98) the Court stressed the following sentence from page 145 of the Duby opinion:

> "Regulation as to the method of use therefore necessarily remains with the state and cannot be interfered

with *unless the regulation is so arbitrary and unreasonable as to defeat the useful purpose for which Congress has made its large contribution to bettering the highway systems of the Union and to facilitating the carrying of the mails over them.*" (Emphasis supplied.)

For convenience, the italicized portion of the above quotation will hereinafter be referred to as the "unless clause."

After repeating the above quotation at the beginning of the trial the Court then said: "In other words, we will pass upon the question as to whether the Act constitutes an unreasonable burden on interstate commerce • • •."

The opinion of the lower court (R. 68, 71) is explanatory of its findings. In explaining its conclusions as to the unreasonableness of the South Carolina Act, the court first observes that the highways it describes in its decree are "great arteries of interstate commerce" that they "carry the larger part of interstate traffic moving to and from the state, as well as such traffic passing through the state to and from Georgia and Florida and the states to the north" and concludes "we think it an unreasonable burden upon the interstate commerce moving over them to enforce the restrictions above mentioned, and thereby virtually close the roads of the state to a large part of such commerce • • •." The court then (R. 65) observes the development of commerce by truck and the dependency of southeastern states upon such truck commerce, that a large part of this interstate traffic would be virtually barred from the highways of South Carolina and concludes (R. 65) that "the reasonableness of the restrictions must be viewed in the light of such a consequence." The court again (R. 68) refers to the Federal aid which had been extended to the State of South Carolina and states that while the fact that the Federal government has aided in the construction of the highways does not detract from the power of the State to regulate and control them "it is, we think, a circumstance

which should be considered in passing upon the reasonableness of a state statute the effect of which would be to drive an important part of interstate commerce from the highways and withdraw them to that extent from the use for which they were intended and for which the federal aid was granted." The court then quotes a long excerpt from *Nashville etc. R. Co.* v. *Walters, supra,* in order to show the purpose of Congress in extending Federal aid, then refers to the experience of other States and the judgment of those having special knowledge with respect to dealing with size and weight of vehicles using the highways as bearing upon the reasonableness of the statute. The opinion is replete with affirmative statements to the effect that the findings of fact and conclusions of law reached by the court pertaining to the reasonableness of the South Carolina statute are based directly upon the court's consideration of the effect of the enforcement of the statute upon interstate commerce and not exclusively upon the relationship between the statute as a means and the preservation of the highways and safety upon them as the end sought to be accomplished. It is apparent that this course was pursued by the lower court in reliance upon its misunderstanding of the "unless clause" in the above quoted portion of the opinion in the *Duby* case.

We will now endeavor to demonstrate (what perhaps needs no demonstration) that *this* court did not mean to say, in the above quoted excerpt from the *Duby* case, or at any other place in the opinion, that the Federal Highway Act or any developments under it supersedes or affects in any degree the power of the State to make and enforce weight and size limitation laws. This is evident from the principles involved in the discussion just above of *Buck* v. *Kuykendall* and *Bush* v. *Malloy,* from an independent consideration of the *Duby* opinion as a whole, and from the subsequent opinions of this Court construing and applying it.

It will be observed from the above that the lower court attributed to the "unless clause" in the *Duby* opinion authority (1) to test the reasonableness of the South Carolina act in question by the effect upon interstate commerce of its enforcement and (2) to test the reasonableness of the South Carolina act by its effect upon the purposes of Congress evidenced by the Federal Highway Act and its financial contributions thereunder. We submit that in both of these respects the lower court was in error and that such error so permeated its entire opinion, findings and conclusions as to produce fatal error in its decree.

As stated above, there are two fundamental rules of law established by long lines of decisions by this Court which the lower court's application of the "unless clause" in the *Duby* case violates. These rules are (1) That the consequent effect upon interstate commerce of the exercise of a State's police power, otherwise valid, is entirely immaterial and, being immaterial, cannot be applied as a test of its reasonableness and consequent validity and (2) Where an act of Congress does not actually supersede police power which a State may exercise until Congress acts the Federal act has no limiting effect whatever upon the State power, that supersession will not be implied unless the Federal act, fairly interpreted, is in actual conflict with the State law.

We submit that if a State police power statute providing one limitation, and reasonable under ordinary tests, must provide a higher limitation in order to preserve its validity when its reasonableness is further tested by its consequent effect upon interstate commerce, to subject the statute to such further test violates the first of the above well established rules. We further submit that if a State police power statute, reasonable under ordinary tests, may be unreasonable or must be less stringent when further tested by the terms or effect of the Federal Highway Act, or any

developments pursuant thereto, the State's power is thereby and to that extent directly circumscribed by such Federal Highway Act and that to apply such test violates the second well established rule mentioned above.

The "unless clause" upon which the lower court based its decision, appears as a qualifying clause used in a negative sense in the next to last sentence in the *Duby* opinion. Since the meaning ascribed to that clause by the lower court would have meant the overturning of at least two well established and long standing rules of law it is inconceivable that the Supreme Court would have intended its words to have such meaning without some explanation of its former decisions, the reasons for their reversal and the basis and reason for the establishment of such an entirely new rule. The fact that such meaning was not intended is further proven when in the *Sproles* case, *supra,* and the *Bradley* case, *supra,* such meaning was not attributed to its language. It is not enough to avoid the rule that such State acts may not be tested by their effect on interstate commerce to point out that in the *Sproles* case and the *Duby* case no well connected system of highways was involved because the same rule was applied in the *Erie* case, *supra* (254 U. S. 394), and the *New Haven* case, *supra* (165 U. S. 628). In those cases a national system of well connected railways was involved yet the reasonableness of the State police power statutes was not subjected to the test of their effect on interstate commerce. Neither is the rule avoided by pointing out that in the *Duby* case and the *Sproles* case there was no such showing of interference with interstate commerce as was made in the instant case. The reasonableness of the State statute in the *Erie* case was not tested by its effect on interstate commerce even though the court said that if compliance by the railroads was burdensome "it could stop". In the *New Haven* case compliance with the regulations "could not be endured". In the *Bay-*

side case, *supra* (297 U. S. 422), and the *Hesterberg* case, *supra* (211 U. S. 31), interstate commerce was absolutely prohibited as a means of preserving the State's property. In short, the meaning ascribed by the lower court to the language in the "unless clause" cannot possibly be reconciled with prior or subsequent decisions nor with the preceding portions of the *opinion in which it appears,* and it is not to be assumed that the court intended to invalidate two old rules and lay down a new one in the manner in which it used such language.

The meaning ascribed by the lower court to the "unless clause" in the *Duby* opinion is inconsistent with previous statements in the same opinion. There the court said:

> "An examination of the Acts of Congress discloses no provision, express or implied, by which there is withheld from the State its ordinary police power to conserve the highways in the interest of the public and to prescribe such reasonable regulations for their use as may be wise to prevent injury and damage to them. In the absence of national legislation especially covering the subject of interstate commerce, the State may rightly prescribe uniform regulations adapted to promote safety upon its highways and the conservation of their use, applicable alike to vehicles moving in interstate commerce and those of its own citizens."

The Federal Highway Act had been passed when the *Duby* opinion was rendered and was one of the acts examined. In fact that act was necessarily one of those so examined because the alleged limiting effect of such act was the principal claim relied upon by the appellant in that case. There was nothing in it "express or implied" to subject the State statute to the test of compliance with the purpose of such act. The "national legislation especially covering the subject of interstate commerce" could not therefore have meant the Federal Highway Act and for the

same reason the Motor Carrier Act, 1935, could not constitute the requisite Act of Congress for it does not regulate size and weight of vehicles. The above excerpt was quoted in the *Sproles* case and no such limitation as the lower court would read into the "unless clause" was there applied.

The court in the *Duby* opinion next quotes with approval from the *Buck* case the following:

> "With the increase in number and size of the vehicles used upon a highway, both the danger and the wear and tear grow. To exclude unnecessary vehicles—particularly the large ones commonly used by carriers for hire—promotes both safety and economy. State regulation of that character is valid even as applied to interstate commerce, in the absence of legislation by Congress which deals specifically with the subject (citing cases). Neither the recent Federal Highway acts nor the earlier post road acts do that (citing statutes).

There the court rejects the contention that the Federal Highway Act does, in any manner, affect State power because it does not deal "specifically with the subject" of size and weight. The meaning ascribed by the lower court to the "unless clause" would be inconsistent with the above quotation.

The *Duby* opinion then reaffirms the first general rule mentioned above when it rejects the inability of a truck company to make a profit as a test of the reasonableness of the act. If the purpose of the Congress expressed through the Federal Highway Act may be defeated by the increase in operating cost of interstate carriers using South Carolina roads with trucks which comply with the law (as the lower court would interpret the "unless clause") the observation in the *Duby* case concerning the carrier's inability to make a profit would be inconsistent with the

lower court's interpretation of the "unless clause" in the same opinion.

The court then rejects the claim of fraud by placing complete reliance in the judgment of the Highway Commission on the question of the need for the regulations *as a means of preserving the roads.* The only test there applied was the Commission's judgment as to the need for the regulations for conservation purposes, not the question of conflict with the aims of Congress or the effect of their enforcement on in[illegible]at [illegible]mmerce.

At no point in the *Sproles* case is there any intimation by the court that the reasonableness of the Texas act was to be in any way subjected to the tests the lower court in this case would read into the "unless clause". In the *Bradley* case the court quotes the *Duby* case as authority for the proposition that since "Congress has not dealt with the subject" * * * "The State may exclude from the public highways vehicles engaged exclusively in interstate commerce, if of a size deemed dangerous to the public safety." In the *Bradley* case the only qualifications on State power to enact and enforce size and weight laws or even regulations to prohibit the use of congested roads, which were mentioned by the court, were the object (to promote safety) and the legislative judgment deeming them necessary. Neither their consequent effect on interstate commerce nor their effect on the object of Congress as expressed in the Federal Highway Act were applied as tests. No mention of such a meaning of the "unless clause" was even intimated by the court in the *Bradley* case.

It is also pertinent that the "unless clause" in the *Duby* case was used in a negative sense. Even to attribute to it the meaning adopted by the lower court (which we do not believe is justified), attention is called to the fact that the court did not affirmatively hold that regulations, otherwise valid, which would defeat the "useful purpose" for which

the contributions were made, would result in the invalidity of the act. Attention is also called to the fact that in the sentence preceding that in which the "unless clause" appears the court, without qualification, held that *conserving limitation* must rest with the road supervising authorities of the State. The following sentence refers to *"regulations as to method of use."* There may have been some significance in the differentiation in terminology in the two sentences, for obviously "regulations as to methods of use" has a different meaning than "conserving limitation."

From all of the above it is clear that whatever the court did mean by the use of the "unless clause" in the *Duby* opinion it did *not* mean (1) that the reasonableness of a size and weight limitation may be tested by its effect on interstate commerce or (2) that size and weight limitations may be tested as to reasonableness by their effect upon the purpose of Congress in passing the Federal Highway Act or making financial contributions thereunder. It is clear that the lower court, in construing the "unless clause" as it did, erroneously applied the law and that such error resulted in the erroneous decree.

Having shown by the foregoing that the Supreme Court, in the *Duby* case, did not intend by the use of the so-called "unless clause" the meaning which was attributed to it by the lower court, if it is pertinent to the issues in this case we hereby briefly summarize our affirmative position as to what the court did mean by that language.

The meaning of the "unless clause", shown by the propositions announced by the court in the preceding portions of that opinion, by the language used in that clause itself and by the application of that opinion in subsequent cases, notably the *Sproles* case and the *Bradley* case, is that, if a State statute enacted to preserve the highways or protect the traveling public is not so unreasonable and arbitrary as to violate the 14th Amendment, it does not violate

the commerce clause nor conflict with the purposes of the Federal Highway Act in the absence of discrimination against interstate commerce. In other words the purposes of Congress in the enactment of the Federal Highway Act are not, in any degree, an additional measure of the reasonableness of the State statute.

But even if we should be in error as to the meaning of the so-called "unless clause" and if "the useful purposes" of Congress expressed in the Federal Highway Act were to be considered as the standard by which the validity of the State statute is to be measured, that fact would not restrict the State's police power to regulate the *size and weight* of trucks using the roads in the absence of specific provisions by Congress to that effect. Although the obvious purpose of the Federal Highway Act was to help the States construct better roads it was not its purpose to prescribe the size and weight of vehicles which might use them nor to prevent the States from so doing. There is no provision in the Act to that effect. This Court, in the *Duby* opinion, expressly declared that there is nothing in such act, express or implied, which would do that. The attack on the Oregon statute in that case was based upon the alleged defeat of the purpose of Congress in contributing funds under such act. The trucking company there charged that a 16,500 pound weight limitation applied to an interstate carrier using a Federal aid road would do so, and that its inability to make a profit in its operations had the same effect. These and all other allegations of the bill, admitted as true on motion to dismiss, did not avail to prevent the dismissal of the suit on the ground "that it did not state a cause of action".

In the instant case the lower court concluded that the enforcement of the assailed statute would make it more expensive for appellees to operate in South Carolina than in some other States because they must haul lighter loads or

use more narrow trucks. From this it concluded that some interstate commerce might be burdened or prohibited and, from that, concluded that one of the purposes of Congress in extending Federal aid might be interfered with or defeated. From the *Duby* case alone it is clear that even such increased expense (which we do not concede was proven in the case at bar) would not operate to defeat any purpose of Congress referred to in the "unless clause" in the *Duby* case.

In relating the two Federal Acts and the inconvenience to interstate motor carriers to the reasons for its decision the lower court stressed some of the statements in *Nashville, C. & St. L. Ry.* v. *Walters*, 294 U. S. 405 (R. 68). After referring to the qualifying language in the last sentence of the *Duby* opinion as the basis for its new rule for testing the reasonableness of the statute, it refers to a long excerpt from the opinion in the *Walters* case as explanatory of the purpose of the aid extended by the Federal Government under the Federal Highway Act in the development of interstate commerce. For the reasons above urged it is apparent that the purpose of the Congress, as explained in such Highway Act, or otherwise, can not possibly operate to circumscribe State power without outright supersession. The *Walters* case is not authority for the interpretation placed upon the Federal Highway Act by the court below, nor is it controlling on any of the issues in the instant case. In the *Walters* case the Supreme Court of Tennessee had refused to consider evidence offered by the railroad company bearing upon the reasonableness and consequent validity of a State statute requiring the railroad to pay one-half of the cost of a grade separation. Part of the testimony in question was that which pertained to the Federal Highway Act and the many developments in transportation resulting from motor vehicles and highways. It is part of this Court's summary of the proffered evidence which is quoted

by the court below. In the *Walters* case this Court held that the reasonableness of the Tennessee requirement bearing upon the obligation of a particular property owner depended upon the *relationship* of that property owner *to the evil* sought to be corrected by the statute. It held that evidence pertaining to developments in highway transportation and similar matters was pertinent in determining the reasonableness of the Act under the 14th Amendment *because it bore upon the relationship between the means and the end,* that is, the obligation *or duty* of the railroad to eradicate the evil or to effectuate the convenience sought to be accomplished by its financial contribution. There the relationship rested upon the duty of the railroad, previously the cause of the danger and the chief beneficiary of the convenience, to pay the cost of curing the evil. It held that the evidence quoted by the court below plus much other evidence as to changes in economic conditions might bear on the railroads responsibility for the danger or the amount of benefit it received from the improvement. This Court did not pass upon that evidence but merely held that it was pertinent in considering whether or not the duty under such circumstances still exists.

There is no parallel in the *Walters* case with any of the questions involved herein. Here, the relationship is purely a matter of physics. None of the evidence of the character discussed in the *Walters* case and cited by the court below operates to reduce or eliminate the destructibility of a motor vehicle, or to minimize the duty of highway users to avoid the destruction of the roads they use. The statute here in issue is based on the obvious principle of requiring one who is benefited by the highways to conform to regulations which conserve them. In the *Walters* case the court did not announce any new principle of law; it only applied well settled rules to the facts presented. ***But the application which the District Court sought to make of the two Federal***

statutes above mentioned and the above cases, unlike the Walters case, calls not for the application of established rules to the record facts but for the abandonment of long established rules of law and the making of a new rule.

The lower court not only applied tests of reasonableness which were erroneous as a matter of law but improperly applied such erroneous tests as a matter of fact. To state it briefly, the lower court held the Act unreasonable because it concluded that its enforcement would defeat the useful purposes for which the Congress, pursuant to the Federal Highway Act, has extended Federal aid to the State of South Carolina. We submit that if it is material to the issues, the enforcement of the Act in question will *carry out*, rather than defeat, the purpose for which Congress has made such contribution. Without an extended discussion of the purpose of Congress in extending such aid, it must be admitted that it was extended to assist in the construction of highways, whatever may be the purpose for which such highways, once built, may be used. By the acceptance of such aid the State undertook to maintain the aided roads. If highways are to be used at all, they must be preserved. If trucks heavier than those which the roads may properly bear are permitted to use them, the roads themselves will be destroyed. If trucks wider or heavier than those which are safe are indiscriminately permitted on the roads, then the expected use of, and commerce over, the roads will be impaired. It necessarily follows that size and weight limitation statutes are, in fact, aids to interstate commerce. They preserve the roads over which it is conducted and which make such commerce possible. It must be conceded that some weight and width limit is necessary. One witness testified (R. 156) that trailers built by his company were capable of carrying loads of from seven and one-half tons up to *one hundred tons*. Neither Congress nor any Federal administrative body has laid down limita-

tions to preserve roads. Whether or not Congress or any subordinate agency may do so is not involved in this appeal. The State is the sole agency which now has the power to do so. If discrepancy exists between State limitations to such an extent as to interfere with the interstate commerce *passing over* the roads, once built and properly maintained, there is no evidence that Congress has deemed it sufficiently material to defeat its purpose, for there has been passed no act of Congress bearing on the subject. That Congress has *not* deemed its purpose frustrated is evidenced by section 325 of the Motor Carrier Act, 1935, where it directs the Interstate Commerce Commission to "investigate" and "report" on the "need" for such regulation. No such report is shown and if such report had been made in the affirmative, that would not mean that the Congress would agree with its subordinate agency.

If Congress intended that the commerce it contemplated necessarily included trucks weighing more than 20,000 pounds each, it would have confined its aid to roads built of concrete. The only roads for which the court held the Act unreasonable were those surfaced with concrete. The Congress has not limited its aid to such roads and the record affirmatively shows its aid has been extended for roads surfaced with other materials (R. 253). Of the 2,797 miles in South Carolina on which Federal aid has been expended with approval of the U. S. Bureau of Public Roads, only 989 miles, or less than 36 per cent, have been surfaced with concrete or bituminous concrete. If roadways surfaced with concrete are essential to the movement of heavier and wider vehicles than those permitted by the statute, and that is the effect of the lower court's decision, the Congress has expressed no intent to promote interstate commerce *by such heavier and wider vehicles* because Federal aid has not been confined to the construction of *concrete* roads. Because the lower court concluded that Congress intended to pro-

mote interstate commerce by truck, it does not follow that it necessarily intended such truck commerce should be by vehicles heavier than 20,000 pounds or more than 90 inches wide. There is no showing of any such intent by even the Interstate Commerce Commission on the subject. It is therefore clear that weight and size limitations are aids to interstate commerce and there is no showing in the record that the specific limitations involved here are such as to defeat any ascertainable intention of the Congress. As previously pointed out, the highway traffic over South Carolina roads conducted by vehicles as heavy as 20,000 pounds is enough to be dangerous to roads and safety, yet is negligible when compared with the aggregate traffic by automobile and lighter trucks. Even to carry out the intent of the Federal Highway Act, it is obvious that doubts as to ability of pavements should be resolved against heavier trucks in the fair consideration of the rights and interests of the great majority of those who use the highways.

It may be argued that even though the Federal Highway Act may not be a proper test of the reasonableness of the statute, the development of interstate highways as the result of such Act, and the development of traffic over them, has operated to change the nature of the subject matter of the statute so that it is no longer a "matter which admits of local treatment according to the requirements of local circumstances." We submit that the evidence does not warrant any such conclusion and in fact shows the converse. Common observation shows that weight and size limitations pertaining to motor vehicles depend, for their validity upon the physical characteristics of the highways over which they operate. National uniformity in such regulations must necessarily depend upon national uniformity in the physical characteristics or the load supporting capacity of public highways. There was not even any attempt by appellees to show national uniformity of high-

ways in either respect. The thickness of the concrete pavement was a premise upon which each expert witness based his opinion as to the capacity of the slab. There is no showing as to any semblance of national uniformity in the thickness of slabs on such roads as are surfaced with concrete, and we submit that none exists. There is no showing as to any semblance of an interconnected national system of *concrete* highways, and we submit that none exists. The record in *Sproles* v. *Binford, supra*, indicates the absence of such system in Texas and the record here indicates the absence of such system in South Carolina.

Furthermore, even if such uniformity in concrete slabs did exist, we have shown in our subdivision (d) under Point II—1—of this brief that the subgrade is an essential part of every road, that there is no uniformity in subgrade conditions, and that they vary greatly with soil and climatic and other conditions throughout the country. The National Conference on Street and Highway Safety frankly recognizes these facts (Appendix VI, p. 159) when it says that "In view of the varying conditions of traffic, and lack of uniformity in highway construction in the several states, no uniform gross weight limitations are here recommended for general adoption throughout the country."

Aside from these physical considerations, the sheer impracticability of the enforcement of such regulations by a national corps of Federal traffic officers, who would be obliged to prosecute violators of such limitations in Federal tribunals as violators of Federal laws is convincing proof that these matters are, and still remain, matters not only admitting but requiring local treatment according to local circumstances.

It is, furthermore, obvious that these limitations are not only local matters but that their effect upon interstate commerce is purely incidental. The Act applies to interstate and intrastate commerce alike. It does not apply directly

to the business of the appellees. It does not apply at all unless appellees seek to use the highways belonging to the State in the conduct of their business.

To adopt the tests of reasonableness and the rule which would be required in sustaining the lower court's decision would be to subject the States, in the management of their own property and their own affairs, to such an "intolerable supervision as to be repugnant to our fundamental ideas of government." In the ambitious promotion of highway commerce by the Congress, the States would be subjected to the burden of surfacing their own highways in such a manner as to be capable of bearing any type of commerce the Congress might see fit to develop and to the intolerable burden of so policing their highways as to confine the heavy traffic to the "great arteries" of interstate commerce in order to keep it from breaking over, at the innumerable intersections within the States' borders, upon the weaker roads incapable of supporting heavy loads without destruction. The meager showing by appellees in this case is no justification in fact or in law for the adoption of such a far-reaching and unwise policy.

IV.

The District Court had no power to classify the roads and bridges or to rewrite the width limit as those are legislative functions; and lacking such power the Court was required under the evidence and applicable law to hold the entire statute valid as to all roads and bridges (Assignments of Error Nos. 24, 28, 29).

The Court held in its second conclusion of law and by paragraph (3) of its decree that the statute is reasonable as to all of the 60,000 miles of roads in the State except those described in paragraph (1) of the decree, hereinabove referred to as the "definite segment" and the "indefinite

segment", and in such paragraph (1) it enjoined enforcement of the weight limit as to such described roads (R. 84, 85, 86). Those so described in paragraph (1) include a part of the 2,417 miles of concrete and bituminous concrete described by the Court as "standard pavement" (Finding of Fact No. 17, R. 81) and the portions of low type roads interspersed among the mileage of such "standard pavement" (Finding of Fact No. 18, R. 81). The Court also in paragraph (1) of the decree enjoined enforcement of the 90 inch width limit on the roads described in such paragraph, provided the vehicle does not exceed 96 inches in width (R. 86). In paragraph (2) of the decree it is provided that the injunctive order in paragraph (1) shall not extend to bridges on the described highways too weak or narrow to carry trucks permitted to operate by paragraph (1), provided notices forbidding such use are posted on such bridges (R. 86).

Our argument at this point is devoted to the following proposition: (a) The Court lacked the power to classify the roads and bridges or to rewrite the width limit as those are solely legislative functions, and (b) since the Court lacked such power it was required, under the record evidence and the applicable rules of law, to hold the entire Act valid as to all roads and bridges.

It is of course well settled that courts can not take over legislative functions, *Maxwell* v. *Moore*, 22 How. 185, 191. But it will no doubt be urged that this is no case of forbidden judicial legislation but is only an instance of the principle of severability of the valid in a statute from the invalid. Obviously there are only two ways in which the effect of a statute may be changed as the Court has changed the statute in the instant case: (1) either by purely legislative act, or (2) by judicial pronouncement of severability.

It is clear that the Court's action cannot be justified on the theory that it was declaring the statute partially invalid

and saving the remainder. The principle of saving part of a statute by holding it severable from an invalid part is of course familiar, but that principle has never been, and cannot properly be, extended to authorize the decree in this case. The rule of severability is applied in two ways. In the usual application some of the words in a statute are physically pared away to leave a valid act. The other way, rarely used, is that the original wording is left intact but the act is held to apply only to permissible objects.

Of course this second named manner of application is the only one that could prevail here, but a brief consideration of the law involved makes clear that it cannot be relied on to support the Court's action.

Where it is sought to leave the wording of a statute intact, but to limit its application to permissible objects, this can be accomplished only (a) where the statute in the same words includes both objects as to which the State has no power whatsoever to legislate and objects as to which it has such power, *and* (b) where an intention can be read into the statute that it is intended to be applied only to the permissible objects. Unless both of these elements are present the principle of severability cannot apply. *Singer Sewing Machine Co.* v. *Brickell,* 233 U. S. 304, 312-314, and cases cited.

It is manifest that the South Carolina Legislature (a) had power to enact a weight limitation statute applicable to *all* roads in the State, and (b) that it intended this particular statute to govern all such roads. Plainly the rule of severability cannot be invoked to justify the Court's decree taking out from under the statute 4 per cent of the roads.

The point of the foregoing is this: Since the Court's action cannot be justified by the principle of severability, the Court was doing nothing else but legislating, was forsaking its own proper judicial function and usurping the

legislative prerogative. It may be at once urged, however, that this discussion only demonstrates that the Court should have declared the statute invalid as to all roads, and that this Court should now do so. But that argument is entirely unsound, and wholly overlooks the principles which actually govern the case.

In the first place, the fundamental rule of law that should prevail here (assuming now for argument the District Court's premise that the statute is unreasonable as to the 2,417 miles plus the interspersed low type mileage) is the principle, announced in many cases, that a police power statute enacted to cover a general situation admittedly requiring regulation is not rendered invalid because in the necessarily broad general class there is a small marginal class which the statute burdens. This rule is explained and applied to situations similar to the one here involved in cases heretofore cited: *Euclid* v. *Ambler Realty Co.*, 272 U. S. 365; *Purity Extract and Tonic Co.* v. *Lynch*, 226 U. S. 192; *Hebe Co.* v. *Shaw*, 248 U. S. 297; *Silz* v. *Hesterberg*, 211 U. S. 31; *Pierce Oil Corp.* v. *Hope*, 248 U. S. 498; and *Holyoke Water Power Co.* v. *American Writing Paper Co.*, decided March 1, 1937, 81 L. Ed. (adv.) 383. This rule in itself demonstrates the validity of the statute and that the Court improperly indulged in legislation. That the marginal class is small is established by the fact, among others, that only one per cent of the trucks registered in South Carolina are registered to carry more than three tons of net load, and only .06 per cent to carry more than four tons of net load (R. 272).

In the second place, the point that the Court is powerless to legislate demonstrates the necessity of sustaining the action of the South Carolina Legislature. That is, if the District Court had understood that it was powerless to classify the South Carolina highways, it assuredly would have upheld the statute as applied to all highways. Putting

it another way, if the Court had held the Act invalid as to all highways and bridges there cannot be the least question but that its decree under the evidence would be reversed. *Sproles* v. *Binford, supra* (286 U. S. 374). And since it had no power to classify, the decree must be reversed and the Act held valid as to all roads and bridges of the State.

The above considerations also apply to the Court's action respecting bridges. An analysis of the decree makes it evident that the decree has made the carrying capacity of *each* bridge in South Carolina the subject of an individual judicial investigation. The effect of paragraph (2), (R. 85), is to open all bridges to truck traffic *with no restriction as to weight,* but the State Highway Department can close any bridge by posting a notice thereon; and in paragraph (5), (R. 86), the Court retains jurisdiction to conduct a hearing on the propriety of each notice. It is doubtful if American legal history contains an instance of mass assumption of legislative authority by the courts that even approaches this.

The Legislature, in the admitted scope of its authority made one weight limit for all of the bridges of the State. This was too generous for some weak bridges and is absolutely necessary for 75 per cent of the 50 miles of bridges on the State highway system, and it did, without question, open all bridges to *at least* 99.94 per cent of all of the trucks registered in the State when loaded to capacity (R. 272, 114, 229). Assuredly a law applicable generally to a class of objects cannot be nullified by the decision of a court that it will make each individual object covered by the statute a separate subject of judicial investigation.

These considerations also apply to the action of the Court in enjoining the 90 inch width limit on the designated highways in paragraph (1) of the decree, provided the width does not exceed 96 inches (R. 85), but this provision requires

some additional consideration of its own. Obviously the Court had no power to fix a new limit; this was not severing the valid from the invalid but was writing a new statute. It is important to observe that the Court recognized that some width limit is necessary; it felt it must not leave the door wide open as to width limits as it had done in the case of weight limits. *Therefore it is apparent that had the Court not been laboring under the erroneous theory that it could, in vacating one width limit, fix another, it would not have disturbed the 90 inch limit fixed by the Legislature, for a difference of only 6 inches.*

Now it may be argued against the above that *this* Court should simply declare the width limit invalid and stop at that. But that is entirely unsound. That would be neither to affirm nor reverse the decree, but it would be to enter a new decree not justified by the evidence nor by any principles of law.

The Court thus applied as a test of reasonableness of the statute not the correctness of the legislative judgment as to *all* of the roads, nor its own judicial reasoning based on a consideration of the proper sphere of the judicial function; but the test the Court did apply was what it might have done had it been a member of the Legislature. These considerations alone require reversal.

Conclusion.

For all of the foregoing reasons, which are summarized in the subject index, and in the summary of argument on page 34 hereof, it is respectfully submitted that the Act here in question should be declared constitutional as to all of the roads and bridges of the State, and that the decree of the District Court should be reversed and the injunction dissolved. We believe this result is required by settled

principles of law announced by the decisions of this Court, which we have cited.

Respectfully submitted,

JOHN M. DANIEL,
Attorney General of South Carolina;
J. IVEY HUMPHREY,
Assistant Attorney General of South Carolina;
M. J. HOUGH,
Assistant Attorney General of South Carolina;
EUGENE S. BLEASE,
STEVE C. GRIFFITH,
Attorneys for Original Defendants, Appellants.

APPENDIX I.

South Carolina Acts, 1933—Act No. 259, Page 340.

AN ACT to Regulate and Limit the Use of the Public Highways in the State by Motor Trucks, Semi-Trailer Motor Trucks, Semi-Trailers and Trailers; to Enlarge the Powers of the State Highway Department and Other Bodies Having Like Jurisdiction and Incorporated Cities and Towns in Respect Thereof; to Provide for the Enforcement of this Act and to Prescribe Penalties for the Violation Thereof and Exempting Certain of Such Motor Trucks, Semi-Trailer Motor Trucks, Semi-Trailers and Trailers From the Provisions Hereof, or Certain of Such Provisions, and to Repeal All Laws Inconsistent With This Act.

SECTION 1. *Public Policy.*—Be it enacted by the General Assembly of the State of South Carolina: It is hereby declared to be the public policy of this State that heavy motor trucks, alone or in combination with other trucks, increase the cost of highway construction and maintenance, interfere with and limit the use of the highways for normal traffic thereon, and endanger the safety and lives of the traveling public, and that the regulations embodied in this Act are necessary to achieve economy in highway costs, and to permit the highways to be used freely and safely by the traveling public.

SECTION 2. *Definitions.*—When Used in This Act: "Motor trucks" means any motor propelled vehicle designed or used for carrying freight or merchandise and not operated or driven on fixed rails or tracks; but it shall not include self-propelled trucks designed primarily for passenger transportation, though equipped with frames, racks or bodies having a load capacity not exceeding 1,500 pounds.

"Semi-Trailer Motor Trucks" means any motor-propelled truck, not operated or driven on fixed rails or tracks, designed to draw, and to support the front end of a semi-trailer. The tractor (or motor propelled truck), together with the semi-trailer shall be considered one unit, and

the words, "Semi-trailer motor truck" as used in this Act, shall mean and embrace such entire unit. Provided, That nothing contained herein shall alter or be construed to alter existing law in respect to the licensing of semi-trailer trucks, whereby the motor unit and the trailer unit are considered independent units and a license is issued to each separately.

"Semi-Trailer" means a vehicle designed to be attached to, and having its front end supported by, a motor truck or motor truck tractor, and intended for the carrying of freight or merchandise and with a load capacity of over 1,500 pounds, except farm wagons used as trailers.

"Trailer" means any vehicle designed to be drawn by a motor truck, but supported wholly upon its own wheels, and intended for the carriage of freight or merchandise.

"Persons" shall include individuals, partnerships, associations, trusts and corporations, and the receivers, assignees or agents of any of them.

"Highways" shall include any public road, street, avenue, alley or boulevard, bridge, viaduct or trestle and the approaches thereto, within the limits of the State of South Carolina.

"Department" shall mean the State Highway Department of South Carolina.

"Local Authorities" shall mean every county, municipal and local board or body having jurisdiction over, and responsibility for the maintenance of, any highway other than state highways.

SECTION 2a. *Operation on Highways.*—Any person operating a motor truck, semi-trailer or other motor truck combination on or along any State highway shall, at all times, operate such vehicle to right of the center of said highway, so that the entire vehicle, including its load, shall be, at all times to the right of the center of said highway, except while overtaking or passing other vehicles traveling in the same direction. Any person operating a motor truck, semi-trailer or other motor truck combination shall not overtake or pass a vehicle traveling in the same direction when the view of the over-taking vehicle is in any way obscured, or when the vehicle to be overtaken is approaching the crest of a hill or rounding a curve.

SECTION 3. *Trailers.*—No person shall use or operate any trailer, as defined by this Act, on any highway.

SECTION 4. *Weight.*—No person shall operate on any highway any motor truck or semi-trailer whose gross weight, including load, shall exceed 20,000 pounds.

SECTION 5. *Height.*—No person shall operate on any highway any motor truck or semi-trailer motor truck whose height, including any part of the body or load, shall exceed 12 feet 6 inches, but nothing herein contained shall be construed to require the public authorities to provide sufficient vertical clearances to permit the operations of trucks with a height of 12 feet 6 inches.

SECTION 6. *Width.*—No person shall operate on any highway any motor truck or semi-trailer motor truck whose total outside width, including any part of body or load, shall exceed 90 inches.

SECTION 7. *Length.*—No person shall operate on any highway any motor truck or semi-trailer truck, the overall length of which, including load, is in excess of 35 feet. This Section shall not apply to trucks or semi-trailer trucks engaged in the transportation of lumber and logs from the mill or forest to shipping points, or from forest to mill or consumer.

SECTION 8. *Reduced Load and Speed Limits.*—(a) The State Highway Department and local authorities may, upon proper showing, issue special permits, which shall apply to roads or highways under their separate jurisdiction and supervision, for the operation of trucks, the operation of which would otherwise be prohibited under the provisions of this Act, subject to the following conditions:

(1) Any permit under the authority of this Section shall be in writing, which shall at all times be carried in the vehicle operating under the authority thereof, and shall contain such other and further restrictions as deemed necessary in the discretion of the issuing authority.

(2) Permits issued under the authority of this Section by the State Highway Department shall include authority

for the operation of such through any municipality on or along the street generally used on such highway route.

(b) County road authorities and municipal road authorities, in respect to roads under their sole supervision, may prohibit or limit the use of such roads by reducing the limitations fixed by this Act, if, in their discretion, such additional restrictions are proper and necessary; Provided, however, That on any road or street upon which such limitations shall apply there shall be conveniently and conspicuously posted such further restrictions showing the permitted maximum limits (weight, length and height) permitted over such thoroughfares. Provided, further, That no limitations shall be established by any county, municipal or other local authorities pursuant to the provisions of this Section that would interfere with or interrupt traffic as authorized hereunder over State Highways, including officially established detours for such highways, including where such traffic passes over roads, streets or thoroughfares within the sole jurisdiction of such county, municipal or other local authorities, unless such limitations and further restrictions shall have first been approved by the State Highway Department.

SECTION 9. *Exemptions.*—(a) The provisions of this Act shall not apply to motor trucks, semi-trailer motor trucks or trailers, owned by any agency of, the United States, the State of South Carolina, or any county or city or incorporated town therein, nor the equipment used only in husbandry, such as harvesting machines, threshers, and binders constructed so that they can be moved or propelled on the public highways.

(b) The State Highway Department, County Highway authorities, and municipal authorities may each issue special permits applying respectively to State Highways, County Highways and streets of municipalities, for the transportation of such over-size, over-weight, or over-length commodities as cannot reasonably be dismantled, and for the operation of such over-weight or over-size trucks, whose gross weight, including load, height, width or length, may exceed the limits prescribed in this Act, as may reasonably

be necessary for the transportation of such commodities, but such permits shall be issued subject to the following conditions:

(1) Any permit issued by the State Highway Department, or county road authorities, for the operation of a truck failing to come within the limits established by this Act or other limits already fixed by law, shall be in writing and shall be limited to one trip of the truck authorized to be moved or operated, as well as to the roads which are to be traversed by the said truck. Any such permit shall contain such further restrictions as in the discretion of the issuing authorities may seem appropriate.

3) (Apparently misnumbered) In the case of any truck operated under the terms of any permit contemplated by this section, whether the same be issued by the State Highway Department, county road authorities or by municipal authorities, the operator shall carry in the said truck the permit for such operation so that it may be available at any time for public inspection.

(4) The operation of any motor vehicle, semi-trailer, or trailer in violation of the terms of any such permit, shall constitute a violation of this Act.

(5) Provided, That any permit issued by the State Highway Department shall give the holder thereof the right of passage over any part of the State Highway System, and all officially established detours thereof, including streets, roads and thoroughfares within the limits of any county, municipality or other local authority that are customarily used as a part of the State Highway System.

(c) The provisions of this Act shall not apply, prior to December 31, 1934, to any motor truck, semi-trailer, or trailer, which has been registered and on which has been paid the annual registration fee as provided, by the law of this State, before the date upon which this Act shall become effective, but shall, as to such trucks, be and become in full force and effect on and after December 31, 1934.

(d) The provisions of this Act shall not apply to telephone, telegraph or electric power companies, hauling by

means of their own vehicles, their own materials and equipment for construction or maintenance of their own property.

SECTION 10. *Penalties.*—The operation of any motor truck, semi-trailer motor truck or trailer, in violation of any section of this Act, or of the terms of any special permit issued hereunder shall constitute a misdemeanor, and the owner thereof, if such violation was with his knowledge or consent and the operator thereof shall on conviction be fined not more than Fifty ($50.00) Dollars, or imprisoned for not more than thirty (30) days.

(This Section as printed in the official bound volume of the South Carolina Acts, 1933, is in part misprinted and the above language of the Section is taken from an official copy of the statute filed in the office of the Secretary of State.)

SECTION 11. *Enforcement.*—Any officer hereinafter in Section Twelve enumerated, having reason to believe that the height, length, width or weight of any motor truck, semi-trailer motor truck or trailer, is in excess of the maximum limits prescribed by this Act permitted by any special permit issued under the terms hereof, is authorized to measure or weigh the same, either by means of portable or stationary scales, in the event such scales are on the route of said vehicle. Said officer shall require the operator of said motor truck, semi-trailer motor truck or trailer, to unload immediately such portion of load as may be necessary to decrease the gross weight of such vehicle to the maximum gross weight permitted by this Act or by the terms of any special permit in the possession of such operator and issued under the provisions of Section 9 (b) hereof (which excess load, when unloaded, shall be at the sole risk of the owner). The refusal of any such operator to permit his motor truck, semi-trailer motor truck or trailer to be measured or weighed or to proceed to a stationary scale, or to unload the excess load, shall constitute a violation of this Act.

SECTION 12. *Enforcement—Officers—Powers and Duties—Rights of Accused.*—Any peace officers, including sheriffs and their deputies, constables, police officers and marshals

of cities or incorporated towns, county police or patrols, State or County license inspectors and their deputies, and special officers appointed by any agency of the State of South Carolina for the enforcement of its law relating to motor trucks, now existing or hereafter enacted, shall be authorized, and it is hereby made the duty of each of them to enforce the provisions of this Act and to make arrests for any violation or violations thereof, and for violations of any other law relating to motor trucks, without warrant if the offense be committed in his presence, and with warrant if he does not observe the commission of the offense. When in pursuit of any offender for any offense committed within his jurisdiction, any such officer may follow and effect an arrest beyond the limits of his jurisdiction. If the arrest be made without warrant, the accused may elect to be immediately taken before the nearest court having jurisdiction, whereupon it shall be the duty of the officer to so take him. If the accused elect not to be so taken, then it shall be the duty of the officer to require of the accused a cash bond in a sum of not less than $25.00 for which the officers shall give a receipt stating the time and place where and when the accused is required to appear; conditioned that the accused binds himself to appear in the nearest court having jurisdiction at the time fixed in the bond. In case the arrested person fails to appear on the day fixed, the bond shall be forfeited in the manner as is provided for the forfeiture of bonds in other cases.

SECTION 13. *Severability.*—If any provision of this Act is declared unconstitutional or void for any reason or the applicability thereof to any person or circumstances is held invalid, the validity of the remainder of the Act and the applicability of such provisions to other persons and circumstances shall not be affected thereby. It is the intention of the General Assembly that, if this Act cannot take effect in its entirety because of the judgment of any court of competent jurisdiction holding unconstitutional or void for any reason any provision or provisions thereof, the remaining provisions shall be given full force and effect as completely as though the provision or provisions held unconstitutional or void had not been included in this Act.

SECTION 14. *Repeal Provision.*—All laws, or clauses of laws, in conflict, or inconsistent, with the provisions of this Act, to the extent of such conflict or inconsistency are hereby repealed.

SECTION 15. This Act shall take effect upon its approval by the Governor.

Approved the 28th day of April, 1933.

APPENDIX II.

Acts S. C., 1931—Statutes at Large, No. 575.

AN ACT to Create a Commission for the Purpose of Investigating Motor Transportation in South Carolina; and to Report to the Next General Assembly.

SECTION 1. *Commission to Investigate Motor Transportation—When to Report.*—Be it enacted by the General Assembly of the State of South Carolina: That there is hereby created a Commission of five members for the purpose of thoroughly investigating the question of motor transportation of freight and/or passengers in South Carolina, which said Commission shall report its findings and recommendations to the next session of the General Assembly of South Carolina.

SECTION 2. *Members—Appointments.*—That said Commission shall consist of two members of the State Highway Commission, two members of the Railroad Commission of South Carolina, to be appointed by the Chairman of the Railroad Commission of South Carolina, and one member of the South Carolina Tax Commission, to be appointed by the Chairman of the South Carolina Tax Commission; that said Commission shall organize by selecting one of its members Chairman.

SECTION 3. *Authority of Commission.*—That said Commission is hereby clothed with full authority to subpœna

witnesses and administer oaths, and to require the production of any and all documents, books, and records of whatever kind and nature pertaining to the question of motor transportation and/or the costs of motor transportation and/or taxes upon motor transportation as compared with the costs and taxes of railroad carriers in South Carolina. That the report of said Commission to be made to the General Assembly of 1932, shall include full findings of fact, together with recommendations and suggested legislation, preferably in the form of bills.

SECTION 4. *Compensation of Members—Employ Clerical Help—Limit of Expenses.*—That the members of said Commission for their services shall be paid actual traveling expenses incurred in the discharge of their duties hereunder, which said sum shall be paid as now provided by law for members of the two respective Commissions. That said Commission is hereby authorized and empowered to employ such stenographic and auditing assistance as may be necessary for the proper discharge of the duties of said Commission, and that the expenses of the same shall be paid upon proper vouchers from funds collected by the Railroad Commission of South Carolina in administering the Motor Transportation Act: *but, Provided, however,* That the total expense of this investigation shall not exceed the sum of Five Thousand ($5,000.00) Dollars.

SECTION 5. All Acts or parts of Acts inconsistent herewith are hereby repealed.

SECTION 6. This Act shall take effect upon its approval by the Governor.

Approved the 27th day of June, 1931.

APPENDIX III.

Acts of South Carolina, 1920—Statutes at Large, Volume 31, pps. 1072, 1078.

ACT No. 602.

AN ACT to Create a State Highway Department, to Define Its Duties and Powers, to Provide Funds for Its Maintenance by the Licensing of Motor Vehicles Operated on the Highways of the State, to Raise Revenue for the Construction and Maintenance of a System of State Highways, and to Assent to the Provisions of an Act of Congress, Approved July 11, 1916, Entitled "An Act to Provide That the United States, Shall Aid the States in the Construction of Rural Post Roads and for Other Purposes," and All Acts Amendatory thereto.

SECTION 13. *License Fees After January 1, 1921—Limitations on Weight of Trucks—Penalty for Violation—Dealer's License—Transfer of License.*—On and after January 1st, 1921, every resident owner of a motor vehicle in the State of South Carolina shall pay to the State Highway Commission, in lieu of all other State, municipal or county licenses, an annual license as follows: For each automobile weighing not over two thousand pounds the sum of six ($6.00) Dollars, and for each additional five-hundred pounds of weight, or fraction thereof, the additional sum of two ($2.00) dollars. The manufacturer's weight of automobiles shall be accepted as the weight for the purpose of registration hereunder. And for trucks the license fees shall be as follows: Trucks of a capacity not exceeding one ton, fifteen ($15.00) dollars. Trucks exceeding one ton and up to and including two tons, thirty ($30.00) dollars. Trucks exceeding two tons and up to and including three tons, sixty ($60.00) dollars. Trucks exceeding three tons and up to and including four tons, one hundred ($100.00) dollars. Trucks exceeding four tons and up to and including five tons, two hundred ($200.00) dollars. Trucks exceeding five tons and up to and including six tons, two hundred and fifty ($250.00) dollars. Trucks exceeding six tons and up to and including seven and over, three hundred and fifty

($350.00) dollars; Provided, That a reduction of twenty-five (25) per cent. on the license be allowed on all trucks using pneumatic tires on all the wheels. Lumber trucks, and other trucks with trailer attached, shall pay an annual license of $5.00 for each trailer so operated, and an additional sum of $2.00 for every thousand pounds or part thereof of ordinary loading capacity of such trailer: Provided, That no truck larger than a four ton truck shall be allowed to be used on any highway or public road of this state unless the person desiring to operate any such truck larger than a four ton truck shall first make a petition to the authorities in charge of the roads in any county where it is proposed to operate such truck, stating the road or roads proposed to be used, and such road authorities shall consent to the use of such truck on such roads, and such consent shall be approved by the State Highway Engineer, in which event such truck shall, upon payment of the license fee herein provided, be permitted to operate on the roads stated in the petition and none other; any violation of the provisions of this proviso shall be punished as herein provided in Section 15 of this Act. For each motor cycle, three ($3.00) dollars per annum. Every dealer in motor vehicles in this state, before operating any such motor vehicles upon the highways of this State for the purpose of demonstration and sale, shall pay to the State Highway Commission of this State, in lieu of all other State, municipal and county licenses, an annual license of twenty-five ($25.00) dollars for the first make of motor vehicles sold by such dealer, and an additional annual license fee of fifteen ($15.00) dollars for each other make of motor vehicle sold by such dealer. All licenses shall expire on the thirty-first day of December following the date of issue. Annual licenses shall hereafter be issued between the first day of January and the first day of February of each year. In the case of motor vehicles registering for the first time, the full annual fee shall be paid for licenses issued between January the first and March the thirty-first; three-fourths of the annual fee for licenses issued between April the first and June thirtieth; one-half of the annual fees for licenses issued between July first and September thirtieth; and one-fourth

of the annual fees for licenses issued between October first and December thirty-first. Any owner of a motor vehicle upon which the license fee for the then current year shall have been paid shall, upon the sale of said motor vehicle notify the State Highway Department of such sale, giving the name and address of the purchaser, and upon the payment of a transfer fee of fifty (50¢) cents the original license shall be transferred to the new owner. The State Highway Commission shall furnish the Clerk of Court of each County with a sufficient supply of application blanks for license for use of the people of the county.

APPENDIX IV.

Acts of South Carolina, 1924—Statutes at Large, Volume 33, Act. No. 721, Page 1182.

No. 721.

AN ACT to Regulate Traffic Upon the Highways of The State, and to Provide Penalty for Violation Thereof.

SECTION 1. *Limit of Weight and Load for Vehicles on Highways—Measurement.*—Be it enacted by the General Assembly of the State of South Carolina: That from and after the passage of this Act, it shall be unlawful to operate on any of the highways or public roads of this State whether such roads are in the State system or not, any vehicle of four wheels or less the gross weight of which, including its load, is more than twenty thousand pounds, or to operate any vehicle having a greater weight than fifteen thousand pounds on any one axle, or having a load of over six hundred pounds per inch width of wheel concentrated upon the road surface (said width in case of pneumatic tires to be measured between the flanges of the rim and in case of solid rubber tires to be the actual width of said tires.)

APPENDIX V.

Acts of South Carolina, 1930, Statutes at Large, Volume 36, Pages 1192-1193.

"No. 685.

"AN ACT to Limit the Weight, Size and Loads of Vehicles Operated on Public Highways of This State and to Provide Penalties for Violations.

"3. *Weight-Limit-Distribution—This Section Additional to Act No. 543, Acts of 1926—Hauling of Cotton.*—

"Except as authorized in Section four hereof, no vehicle, whether operated singly or in combination with other vehicles on the public roads of this State, shall exceed in gross weight twelve and one-half (12½) tons, and the gross weight on no axle of any vehicle or combination of vehicles, having more than two axles, shall exceed five (5) tons. Any vehicle having more than two axles shall be so designed and constructed as to assure a constant distribution of weight among the axles while such vehicles are in operation, regardless of irregularities in the road surface. No combination of vehicles operated as a unit on the public roads of the State shall have a gross weight exceeding twenty (20) tons: *Provided,* That this Section shall not serve to repeal any provisions of Act No. 543, Acts of 1926, but shall be construed as provided additional limitations: *Provided,* That the limitations as to width of loads as stated in this Section and in Section 2 of this Act, shall not be deemed to prohibit the hauling of bales of cotton in loads not exceeding the width of two bales lying or standing edge to edge, if the bales are touching each other at both ends. It shall be lawful to haul cotton on the public highways of the State where the width of the load does not exceed the width of two bales placed edge to edge, against each other."

APPENDIX VI

Summary of Proceedings, Fourth National Conference on Street and Highway Safety, May 23, 24, 25, 1934.

Act V—Uniform Act Regulating Traffic on the Highways, Article XVI—Size, Weight and Load, pp. 37-8.

SEC. 146. Gross weight of vehicles and loads. 11 (a) No vehicle or combination of vehicles shall be moved or operated on any highway or bridge when the gross weight thereof exceeds the limits specified below:

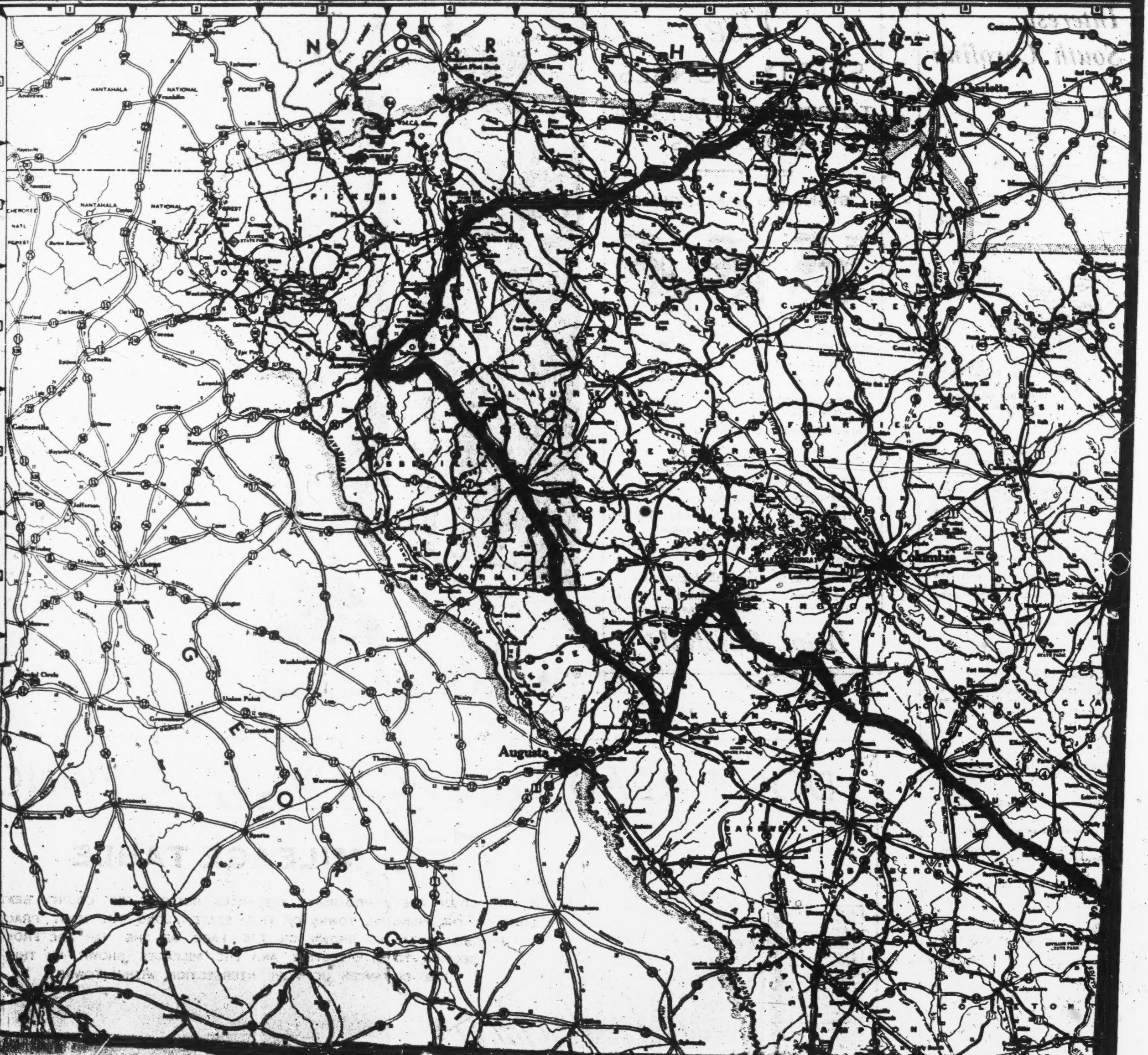
1. The gross weight upon any one axle of a vehicle shall not exceed the limits prescribed in section 145 of this Act.
2. Subject to the limitations prescribed in section 145 of this Act the gross weight of any vehicle having two axles shall not exceed — pounds.
3. Subject to the limitations prescribed in section 145 of this Act the gross weight of any single vehicle having three or more axles shall not exceed — pounds.
4. Subject to the limitations prescribed in section 145 of this Act the gross weight of any combination of vehicles shall not exceed — pounds.

(b) The Commissioner, upon registering any vehicle under the laws of this State which vehicle is designed and used primarily for the transportation of property or for the transportation of 10 or more persons, may require such information and may make such investigation or test as necessary to enable him to determine whether such vehicle may safely be operated upon the highways in compliance with all the provisions of this Act. He shall register every such vehicle for a permissible gross weight not exceeding the limitations set forth in this Act. Every such vehicle shall meet the following requirements:

1. It shall be equipped with brakes as required in section 124 of this Act.
2. Every motor vehicle to be operated outside of business and residence districts shall have motive power adequate to propel at a reasonable speed such vehicle and any load thereon or to be drawn thereby.

(c) The commissioner shall insert in the registration card issued for every such vehicle the gross weight for which it is reigstered, and if it is a motor vehicle to be used for propelling other vehicles he shall separately insert the total permissible gross weight of such motor vehicle and other vehicles to be propelled by it. He may also issue a special plate with such gross weight or weights stated thereon, which shall be attached to the vehicle and displayed thereon at all times. It shall be unlawful for any person to operate any vehicle or combination of vehicles of a gross weight in excess of that for which registered by the commissioner or in excess of the limitations set forth in this Act.

11. In view of the varying conditions of traffic, and lack of uniformity in highway construction in the several States, no uniform gross weight limitations are here recommended for general adoption throughout the country. For the protection of bridges, the American Association of State Highway Officials recommends the following formula: $W = 700\ (L + 40)$ where $W =$ the gross weight in pounds and L equals the length in feet between the centers of the first and last axles of a vehicle or combination of vehicles.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Monroe
Social Circle
Madison
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Greensboro
Union Point
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Thomson
Warrenton
Sandersville
Louisville
Wadley
Waynesboro
Dublin
Swainsboro
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Millen
Sylvania
Vidalia
Lyons
Reidsville
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Claxton
Hinesville
Jesup
Brunswick
Waycross
Douglas
Alma
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Folkston
Homerville
Nantahala
National Forest
Cherokee
Natl Forest
Tallulah Falls
Tugaloo
Toccoa
Lake Tugaloo
Lake Hartwell
Lake Russell
Lake Richard B. Russell
Savannah River
Chattooga River
Tallulah Gorge State Park
Currahee Mountain
Stephens
Franklin
Habersham
Rabun
Banks
Jackson
Clarke
Oconee
Barrow
Gwinnett
Hall
Forsyth
Dawson
Lumpkin
White
Union
Towns
Fannin
Gilmer
Pickens
Dawson
Cherokee
Bartow
Floyd
Polk
Haralson
Paulding
Cobb
Fulton
Douglas
Carroll
Heard
Troup
Meriwether
Coweta
Fayette
Clayton
Henry
Butts
Lamar
Monroe
Upson
Pike
Spalding
Crawford
Peach
Houston
Bibb
Twiggs
Wilkinson
Jones
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Hancock
Taliaferro
Greene
Morgan
Putnam
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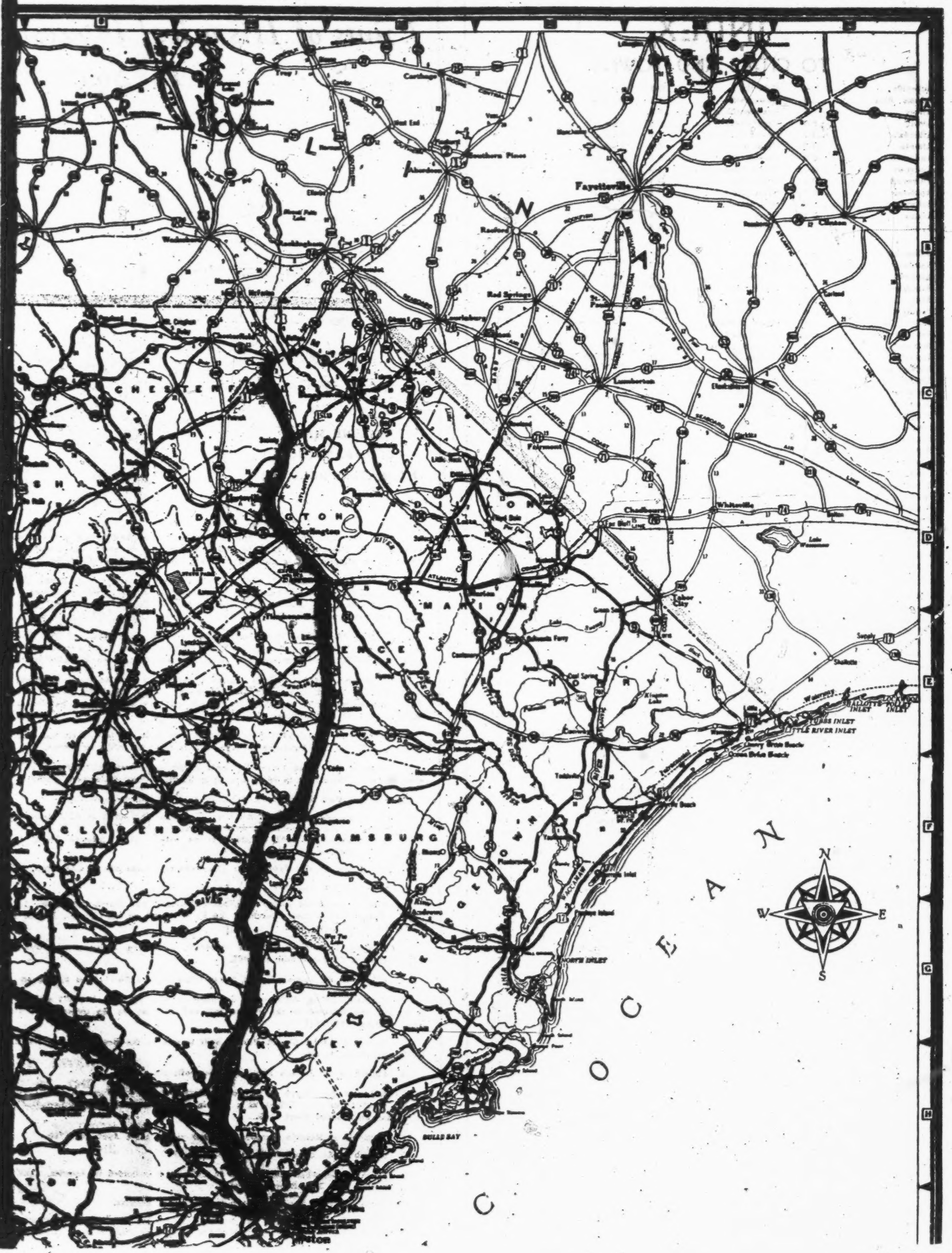
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Kingstree
Lake City
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Hemingway
Lake Wamasee
Little River
Loris
Aynor
Socastee
Longs
Calabash
Ocean Drive Beach
Little River Inlet
Tabbs Inlet
Mullets Inlet
Murrells Inlet
North Inlet
Winyah Bay
Bulls Bay
Pee Dee River
Waccamaw River
Lynches River
Black River
Santee River
Great Pee Dee River
Little Pee Dee River
Lumber River
Cape Fear River
Big Shoe Heel Creek
Little Shoe Heel Creek
Big Swamp
Little Swamp
Lake Swamp
Juniper Swamp
Green Swamp
Jones Swamp
Drowning Creek
Gum Swamp
Lake Waccamaw
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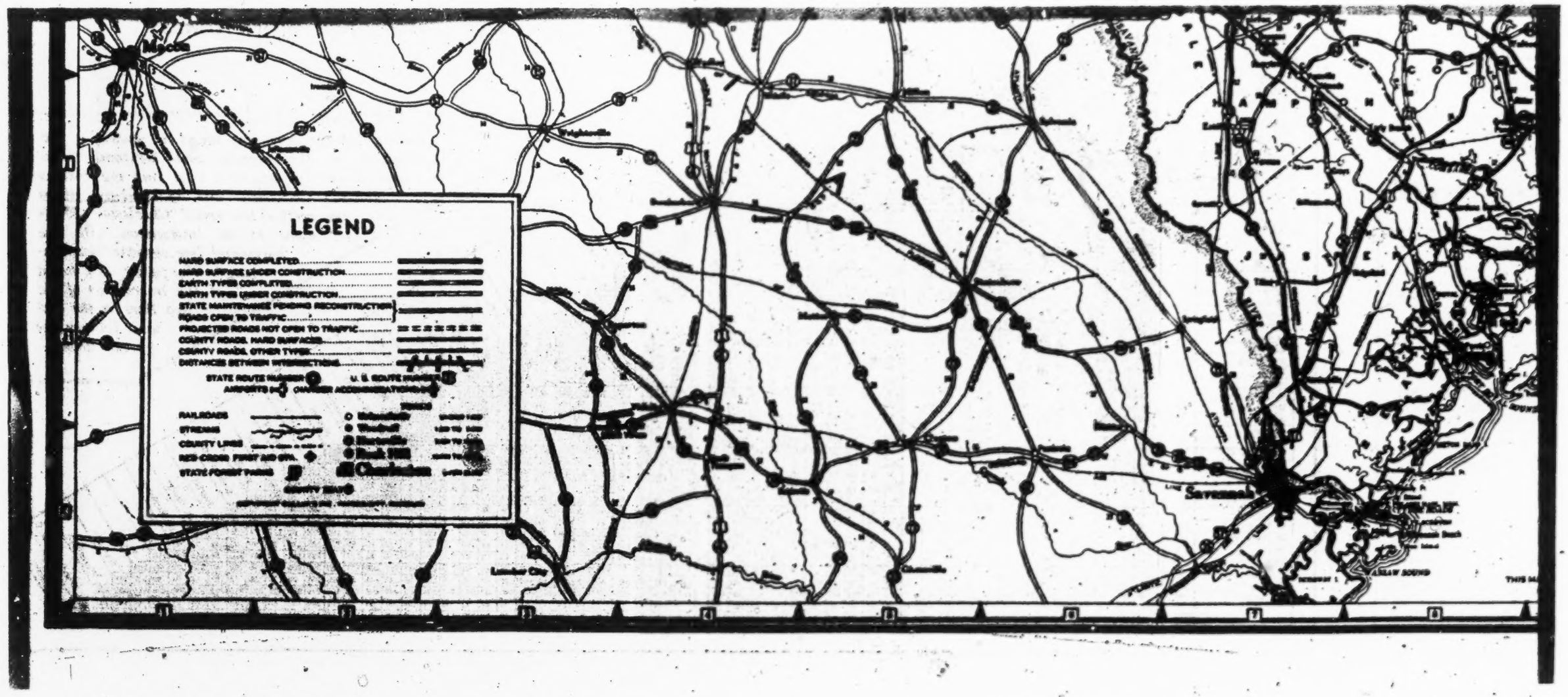
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ROADS OPEN TO TRAFFIC
PROJECTED ROADS NOT OPEN TO TRAFFIC
COUNTY ROADS, HARD SURFACES
COUNTY ROADS, OTHER TYPES
DISTANCES BETWEEN INTERSECTIONS
STATE ROUTE NUMBER
U. S. ROUTE NUMBER
AIRPORTS
RAILROADS
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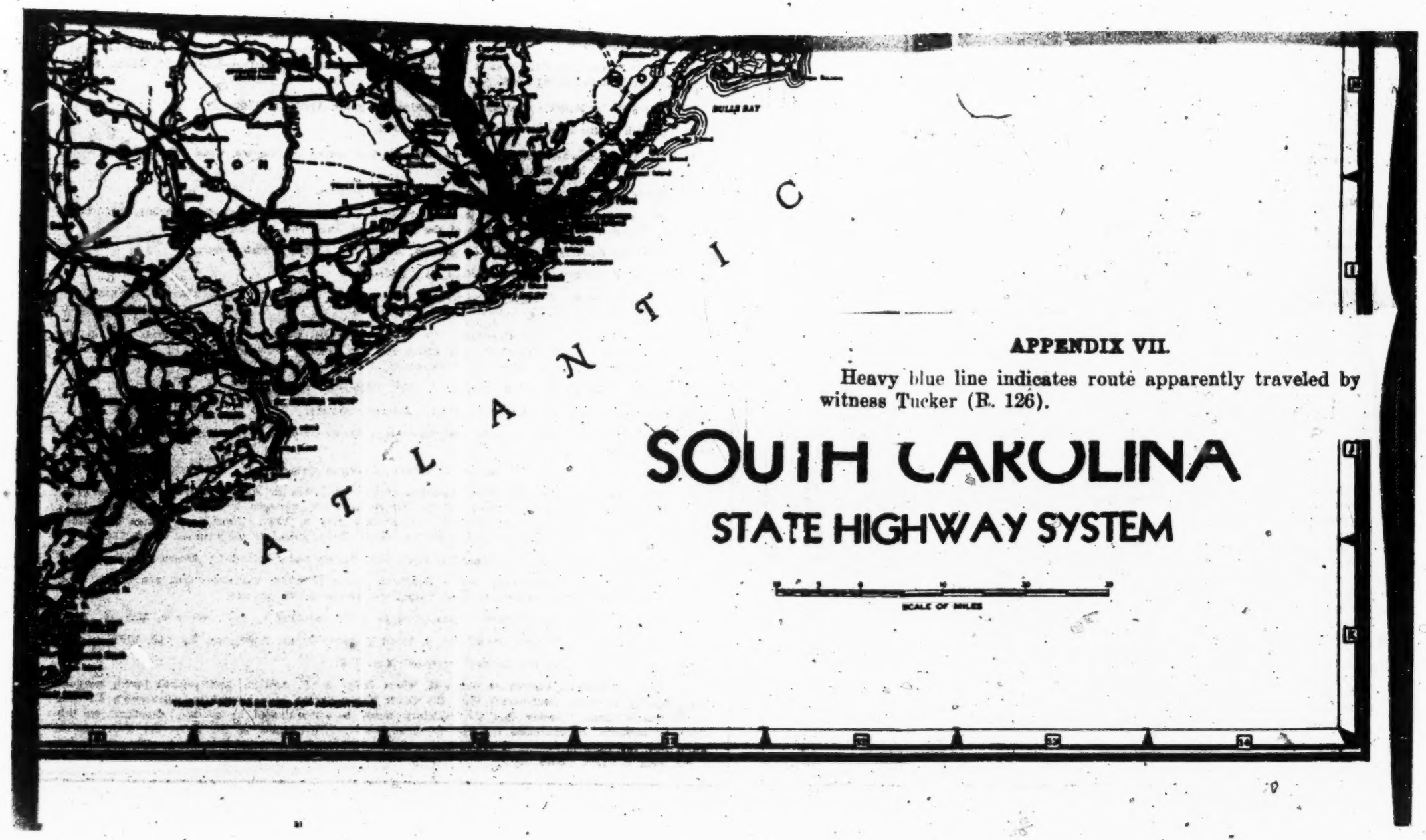

APPENDIX VII.

Heavy blue line indicates route apparently traveled by witness Tucker (R. 126).

SOUTH CAROLINA

STATE HIGHWAY SYSTEM